

Calendar No. 154

105TH CONGRESS }
1st Session }

SENATE

{ REPORT
105-73

AGRICULTURAL RESEARCH, EXTENSION, AND EDUCATION REFORM ACT OF 1997

SEPTEMBER 5, 1997.—Ordered to be printed

Mr. LUGAR, from the Committee on Agriculture, Nutrition, and
Forestry, submitted the following

REPORT

[To accompany S. 1150]

The Committee on Agriculture, Nutrition, and Forestry, having considered the bill to ensure that federally funded agricultural research, extension, and education address high-priority concerns with national or multistate significance, to reform, extend, and eliminate certain agricultural research programs, and for other purposes, reports favorably thereon and recommends that the bill do pass.

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I. PURPOSE AND SUMMARY

Specific agricultural research, extension and education programs were only authorized through September 30, 1997 in the Federal Agriculture Improvement and Reform Act of 1996.

This legislation, the Agricultural Research, Extension and Education Reform Act of 1997, reauthorizes and reforms these programs. Among the major provisions:

1. NEW RESOURCES

New mandatory funding of \$780 million is provided over 5 years (\$100 million in 1998 and \$170 million thereafter through 2002) for research funding through the Initiative for Future Agriculture and Food Systems. This competitively awarded research funding would address critical emerging issues related to future food production, environmental protection, and farm income. Primary mission areas to be addressed with funding in the first year are food genome; food safety, food technology and human nutrition research; new and alternative uses and production of agricultural commodities and products; agricultural biotechnology; and natural resource management including precision agriculture. For subsequent years, the Advisory Board may recommend new or different priority mission areas. Priority would be given to grants that are multistate, multi-institutional, or multidisciplinary and grants that integrate agricultural research, extension and education.

In addition, the current \$100 million Fund for Rural America is extended through 2002 with \$50 million for rural development, \$33 million for research and \$17 million for either at the discretion of the Secretary each year.

2. COLLABORATION AND EFFICIENCY REFORMS

At least 25% of federal research formula funding to land grant institutions would be devoted to multi institutional research that is multidisciplinary and addresses problems that concern more than one state. Increased collaboration between states for funding of Extension Service activities would be achieved by calling on states to double their current level or to spend 25% of federal Extension formula funds on multistate Extension activities that address problems that concern more than one state, whichever is less. Increased integration of research and extension at land grant institutions would be achieved by calling on the institution to double its current level or to spend 25% of the land grant institution's federal formula funds for research and extension on projects that integrate research and extension, whichever is less.

New authority is provided for competitive grants for collaboration between scientists at ARS, land grant institutions or other colleges and universities and scientists at international agricultural research centers focusing on increasing production of food and fiber while safeguarding the environment.

3. ACCOUNTABILITY REFORMS

Stakeholder input would be required when setting priorities for research, extension and education funding at the Department of Agriculture and at land grant institutions. All federal research, extension and education funding would be subject to scientific peer review or merit review. Cooperative State Research, Education and Extension Service competitively awarded funds for research, extension and education activities and Agricultural Research Service research activities must address priority concerns and be of national or multistate significance. All land grant colleges and universities are eligible for Extension Service Funding. Where Extension Service funding is competitive, all colleges and universities could com-

pete. The National Academy of Sciences would review the role and mission of ARS and the broader role of federal funding for agricultural research.

4. OFFSETS

Offsets are obtained through reductions in the administrative costs associated with the Food Stamp program, reductions in information technology spending within the U.S. Department of Agriculture, and reforms to rules for haying and grazing on Conservation Reserve Program lands. Some minor changes are made to augment nutrition programs.

II. BACKGROUND AND NEED FOR THE LEGISLATION

BACKGROUND

Agricultural research, extension and education is the foundation for the future success and viability of our nation's agricultural sector. Agricultural research has enhanced the productivity of our nation's farmers, improved their standard of living, and enhanced their competitiveness in world markets. Advances in biotechnology are being harnessed to boost the efficiency of producers, food processors, and manufacturers still further.

Federal spending on agricultural research, extension and education has been flat the past several decades. Federally funded research, totaling approximately \$1.8 billion annually, is allocated among intramural (or ARS) funds, formula funds to universities, competitive grants, and special grants. However, it is also important to note that the largest share of total agricultural research spending now comes from the private sector. The private sector accounts for about 45% of the total annual expenditures of approximately \$7.3 billion for agricultural research.

Our basic agricultural research structure has been centered in the land-grant college and university system since it was established through the First Morrill Act of 1862. Subsequent legislation authorized land grant status for other schools in 1890 and 1994. The land grant system is unique with its tripartite mission of research, education and extension. Some colleges and universities that are not part of the land grant system also provide agricultural education and conduct research or make discoveries that lead to further applications for agriculture.

With a major reform of federal farm programs in the Federal Agriculture Improvement and Reform Act of 1996 and vast advances in communications and technology, our agricultural sector is radically different from that of the last century. While the number of farms has decreased since that time, the efficiency and productivity of our farmers has soared. Agriculture's contributions to GDP make it a basic and important segment of the economy.

NEED

Agricultural research, extension and higher education are important national investments. Taxpayers receive a rate of return on agricultural research of thirty to fifty percent per year. This investment reduces risk, improves public health, enhances the competi-

tiveness of agricultural producers and businesses, and improves the quality of life for every citizen.

Many challenges face the agricultural sector. First is the need to maintain our lead in productivity and efficiency so that U.S. producers can continue to serve a global marketplace and meet the demands of a growing world population.

With world population projected to double, U.S. producers may well need to triple their production in the next few decades to meet growing demand for food and spare the world's rain forests from being uprooted in a desperate effort to expand production.

To increase future food production, our nation must devote additional resources to agricultural research. This bill provides \$780 million in new funding for agricultural research to address critical emerging issues related to future food production, environmental protection and farm income. Food genome science, food safety, agricultural biotechnology and precision agriculture are key areas that need additional resources to meet the challenges that face U.S. farmers.

This bill also makes significant reforms to the current agricultural research system. This system has served us well. To use our available resources most effectively, however, it is important to ensure more collaboration and efficiency as well as achieve greater accountability. We cannot overlook the relevance or merit of the research, extension and education programs. It is appropriate to ask what the American public is receiving for its \$1.8 billion annual investment in agricultural research, extension and education.

III. LEGISLATIVE HISTORY AND VOTES IN COMMITTEE

The Senate Committee on Agriculture, Nutrition and Forestry held four hearings in March 1997 to review the U.S. agricultural research system in preparation for legislation to reauthorize agricultural research, extension and education programs. All four hearings focused on a list of 42 fundamental questions (printed in the appendix) posed by Chairman Lugar earlier in the year.

At the March 11, 1997 hearing, Mr. Dennis T. Avery, Director of Global Issues for the Hudson Institute, described the many challenges facing the agricultural sector including the need to maintain our lead in productivity and efficiency so that U.S. producers can continue to serve a global marketplace and meet the demands of a growing world population.

Dr. Bruce Alberts, President of the National Academy of Sciences, and Chairman of the National Research Council, and Dr. Terry B. Kinney, Jr., past Administrator of the Agricultural Research Service, provided their respective views on how the current research structure can be strengthened and improved to meet the needs of the changed agriculture sector in the next century.

The basic agricultural research structure has been centered in the land-grant college and university system since it was established through the First Morrill Act of 1862. The land grant system is unique with its tripartite mission of research, education and extension. Dr. R. Rodney Foil, Vice President for Agriculture, Forestry and Veterinary Medicine for Mississippi State University, testified on behalf of the National Association of State Universities and Land Grant Colleges Board on Agriculture. Dr. Richard Ross,

Dean of the College of Veterinary Medicine at Iowa State University, provided views of his institution.

Land grant status was authorized for other schools through legislation in 1890 and 1994. Dr. Samuel L. Donald, Regional Research Director for the University of Maryland—Eastern Shore, testified on behalf of the 1890 universities. Mr. Ron McNeil, President of Sitting Bull College, testified on behalf of the American Indian Higher Education Consortium and provided the views of the 1994 institutions.

Some colleges and universities that are not part of the land grant system provide agricultural education and conduct research or make discoveries that lead to further applications for agriculture. Dr. Margaret N. Perry, Chancellor for the University of Tennessee at Martin, testified on behalf of the American Association of State Colleges and Universities.

Finally, Dr. Victor L. Lechtenberg, Dean of Agriculture for Purdue University, provided testimony as Chairperson of the National Agricultural Research, Extension, Education and Economics Advisory Board.

The March 13, 1997 hearing began with testimony from Dr. Catherine E. Woteki, Acting Under Secretary for Research, Education and Economics at the U.S. Department of Agriculture. Dr. Woteki spoke about the mission of USDA for research, education and economics and about how federally funded agricultural research is currently allocated among intramural funds, formula funds to universities, competitive grants, and special grants.

Dr. Mary E. Clutter, Assistant Director for the Biological Sciences for the National Science Foundation; Dr. Wendy Baldwin, Deputy Director for Extramural Research for the National Institutes of Health; and Dr. James F. Decker, Deputy Director, Office of Energy Research for the U.S. Department of Energy testified about how their respective agencies fund research and set priorities.

Mr. Robert A. Robinson, Director for Food and Agriculture Issues for the General Accounting Office, testified regarding accountability and efficiency issues related to agricultural research.

Representatives from several scientific societies provided their opinions on the structure of the U.S. agricultural research, education and extension system and how it should meet the research and scientific challenges of the next century. Testimony was provided by Dr. David Lineback, Dean of the College of Agriculture for the University of Idaho on behalf of the Council for Agricultural Science and Technology; Dr. Martin Apple, Executive Director for the Council of Scientific Society Presidents; Dr. Louis Sherman, Professor and Head of the Department of Biological Sciences for Purdue University, on behalf of the American Society of Plant Physiologists; and Dr. Suzanne Nielson, Professor for the Department of Food Science at Purdue University, on behalf of the Institute of Food Technologists.

The March 18, 1997 hearing continued discussion of funding mechanisms for agricultural research. Mr. Robert Horsch, Director of Technology and General Manager for the Agracetus Division of the Monsanto Company testified about the private sector's growing role in conducting agricultural research.

Dr. David E. Ervin, Director for Policy Studies for the Henry A. Wallace Institute for Alternative Agriculture testified about the need for improved accountability and the importance of environmental research.

Representatives of two scientific societies provided their opinions about the structure of the U.S. agricultural research, education and extension system and how it will meet the research and scientific challenges of the next century. Testimony was given by Dr. Robert G. Cassens, Professor Emeritus of the Department of Animal Sciences for the University of Wisconsin, on behalf of the Federation of American Societies of Food Animal Sciences and Dr. William W. McFee, Professor and Head of the Agronomy Department for Purdue University on behalf of the American Society of Agronomy, the Crop Science Society of America and the Soil Science Society of America.

Agricultural producers were represented by a panel of witnesses. These representatives spoke about the role of producers in determining research priorities and provided recommendations for how to set priorities for agricultural research, extension and education at the U.S. Department of Agriculture. Providing testimony were Mr. Ron Warfield, President of the Illinois Farm Bureau, on behalf of the American Farm Bureau Federation; Mr. Phil McLain, President of the National Association of Wheat Growers, on behalf of the American Soybean Association, the National Association of Wheat Growers, the National Barley Growers Association, the National Corn Growers Association, the National Cotton Council, the National Grain Sorghum Producers Association, and the USA Rice Federation; Mr. Mike Wehler, Chairman of the Animal Agriculture Coalition, on behalf of the American Sheep Industry Association, the National Cattlemen's Beef Association, the National Milk Producers Federation, and the National Pork Producers Council; Mr. Dennis Wiese, President of the South Dakota Farmers Union, on behalf of the National Farmers Union; and Mr. Ron Rosmann, a member of the Practical Farmers of Iowa and a participant in the Integrated Farming Systems Project of the Kellogg Foundation.

The March 20, 1997 hearing continued the discussion about funding mechanisms for agricultural research. Senator Conrad Burns provided testimony about the importance of agricultural research. Dr. Robert L. Thompson, President and CEO of Winrock International Institute for Agricultural Development, testified regarding the appropriate U.S. role in international agricultural research and changes necessary to strengthen or improve the U.S. linkage with the international agriculture research network.

Dr. Joseph D. Coffey, Chairman of the Council for Agricultural Research, Extension and Teaching, provided testimony on behalf of those who benefit from and utilize agricultural research, education and extension.

The National Association of State Departments of Agriculture was represented by Mr. Charles C. Brosius, Secretary of the Pennsylvania Department of Agriculture, who made suggestions for how best to set research priorities as well as how best to deliver federal agricultural research funding.

Dr. Gregory N. Brown, Dean of the College of Forestry and Wildlife Resources for Virginia Polytechnic Institute and State Univer-

sity, testified on behalf of the National Association of Professional Forestry Schools and Colleges and provided opinions on the structure of the U.S. agricultural research, education and extension system and how it should meet the research and scientific challenges of the next century.

Mr. William Guyton, Vice President and General Manager for Applied Engineering and Development for the Idaho National Engineering and Environmental Laboratory, testified about the need for the Department of Energy and the Department of Agriculture to work cooperatively and to collaborate rather than duplicate each other's efforts and resources, while addressing agricultural research issues of concern to both agencies.

Finally, Mr. W. Bruce Cain, Executive Director of the Alternative Agricultural Research and Commercialization Corporation, testified about efforts to commercialize products derived from agricultural commodities.

ROLLCALL VOTES

The Senate Committee on Agriculture, Nutrition and Forestry, in open business session on July 30, 1997 by a rollcall vote recommended that the Senate pass this original legislation, the Agricultural Research, Extension, and Education Reform Act of 1997.

The rollcall vote on reporting the measure was 18 yeas, 0 nays as follows:

YEAS

NAYS

Mr. Leahy
Mr. Conrad *
Mr. Daschle *
Mr. Baucus
Mr. Kerrey
Ms. Landrieu *
Mr. Johnson
Mr. Harkin
Mr. Helms *
Mr. Cochran
Mr. McConnell
Mr. Coverdell *
Mr. Santorum *
Mr. Roberts
Mr. Grassley *
Mr. Gramm
Mr. Craig
Mr. Lugar

* Indicates proxy vote.

IV. EXPLANATION OF THE LEGISLATION AND COMMITTEE VIEWS

Section 2 defines stakeholder as a person who conducts or uses agricultural research, extension or education. While it is conceivable that USDA employees could be considered stakeholders, it is the Committee's intent that the definition of stakeholder be interpreted more broadly so that USDA must consult with individuals other than its own scientists. Researchers and scientists at colleges and universities including land grant institutions as well as agri-

cultural producers who make use of the research conducted or funded by USDA should be consulted as stakeholders. Other federal agencies could also be stakeholders for USDA research.

TITLE I—PRIORITIES, SCOPE, AND REVIEW OF AGRICULTURAL RESEARCH, EXTENSION AND EDUCATION

Section 101 establishes a standard for research conducted by the Agricultural Research Service and funding awarded competitively by the Cooperative State Research, Education and Extension Service. The Committee expects that the Department would require applicants for grant funding to demonstrate that the project is of multistate or national relevance and to demonstrate the gap in knowledge they are trying to fill.

Section 102 requires the Secretary to establish priorities for agricultural research, extension or education activities conducted or funded by the Department. In establishing these priorities, the Secretary must solicit and consider input and recommendations from stakeholders. Researchers and scientists at colleges and universities including land grant institutions as well as agricultural producers who make use of the research conducted or funded by USDA should be consulted as stakeholders. The Committee expects that the Department will utilize the Advisory Board for stakeholder input when setting priorities. Furthermore, the Committee encourages the utilization of FAIR95, CROPS99 or the Cotton Beltwide Conference as a way for the Advisory Board to gather input for the priority setting process. These are important and successful processes for agricultural producers, with input from other stakeholders, to communicate their needs, priorities and objectives to the research community. These processes also allow feedback and communications between producers and those who conduct the research. The Committee would encourage the organization or creation of other groups following these models. While input of the private sector is vital, it is also important that scientists participate to provide scientific and technical guidance.

Also under Section 102, land grant institutions are required to establish and implement a process for obtaining stakeholder input concerning the use of federal formula funds. While many land grant institutions may already seek stakeholder input, this is the first time it is a statutory requirement. The Committee recognizes that many, if not all, land grant colleges and universities include stakeholder advisory groups in their priority setting processes. The Committee believes it is important that land grant institutions seek stakeholder input about the use of federal formula funds. It is the intent of the Committee that USDA establish broad parameters and guidelines that priority setting processes should meet or exceed to qualify. Each state and region has unique characteristics, problems, and interests that may require their priority setting activities to be different than other programs throughout the nation. Thus, flexibility for these differences must be reflected in the rules that the Secretary promulgates. This requirement for stakeholder input for federal formula funds is effective beginning October 1, 1998.

Section 103 requires the Advisory Board to review, on an annual basis, the relevance to the Secretary's priorities established under

Section 102 and the adequacy, of funding of all agricultural research, extension or education activities of the Department. This is intended to be a review, by the Advisory Board, of the total research, extension and education portfolio. The Advisory Board should evaluate whether input from stakeholders has been incorporated into the priorities and should examine whether funding is provided to the priority issues and review the adequacy of funding for those priority issues. This input should also be helpful to the Department in the budget setting process. Input from the relevancy review by the Advisory Board is to be taken into account by USDA when formulating requests for proposals for agricultural research, extension or education funding and should be utilized as soon as the results from the review are available.

The Committee believes that the Advisory Board has authority to form ad hoc committees comprised of members of the Advisory Board and other individuals to assess issues that concern the Board in performing its duties. This would provide the Board maximum flexibility in carrying out its duties. The Committee would encourage the Board to seek input of individuals not serving on the Board or organizations not represented on the Board through the use of ad hoc committees.

Section 103 also requires that, when formulating requests for proposals, the Secretary must solicit and consider input from stakeholders on the prior year's request for proposals. The Committee believes that stakeholder input is important for formulation of requests for proposals. Researchers and scientists at colleges and universities including land grant institutions as well as agricultural producers who make use of the research conducted or funded by USDA should be consulted as stakeholders. In particular, stakeholders from colleges and universities and private research organizations should be consulted regarding potential limits on the size of grants. The Committee is aware of concerns about the size of grants and has received testimony that grants should be larger.

Section 103(d) requires scientific peer review of ARS research. The Committee believes that the quality and credibility of the Agricultural Research Service will be improved through scientific peer review of research activities. To maximize the benefit of these reviews the Committee expects the Secretary to establish review panels comprised of members with scientific expertise, a majority of whom are not ARS employees. The Committee expects the scientific activities of ARS scientists to be reviewed at a minimum of once every five years. The Committee intends that these reviews and subsequent reports to Congress will address the quality and relevance of the science conducted by ARS scientists to research priorities, and not confidential personnel information.

Under Section 103, land grant institutions must establish a process for merit review of federal formula funds. The Committee understands that many land grant colleges and universities may already have processes in place to merit review their formula fund activities. While many institutions may already conduct this merit review, this is the first time it will be a statutory requirement. The requirement for merit review of federal formula funds is effective October 1, 1998.

Section 104 requires that at least 25% of a state's research formula funds be used for multidisciplinary research in which the state agricultural experiment station works with another state agricultural experiment station, ARS, or a college or university, to solve problems that concern more than one state. The Committee intends that state agricultural experiment stations seek partners across state lines and/or across disciplines to cooperate to solve multistate or national problems. The Committee encourages state agricultural experiment stations to seek new relationships and to collaborate with institutions it has not collaborated with in the past.

Section 105 fosters greater collaboration between states for Extension activities by requiring states, by fiscal year 2000, to double the percentage of Extension federal formula funds devoted to multistate activities or to spend 25% of their Extension federal formula funds on multistate activities, whichever is less. The Secretary can reduce the minimum percentage in case of hardship, infeasibility, or similar circumstance beyond the control of the state, as determined by the Secretary. This should result in less duplication of efforts by individual states and provide more incentive for states to collaborate on issues of national or multistate significance. States must indicate in their plan of work how they will achieve these requirements. The Committee intends that the Secretary should consult with representatives of the land grant institutions when establishing appropriate definitions and management procedures to be used when implementing this section.

Section 106 requires the Secretary to continue to review periodically the agricultural facilities constructed with federal funds and planned agricultural facilities proposed to be constructed with federal funds. The Committee recognizes that the strategic planning task force must submit its 10-year strategic plan by 1999, but wants to ensure that following the submission of the plan, data regarding facilities continue to be collected on a periodic basis.

TITLE II—OTHER REFORM OF AGRICULTURAL RESEARCH, EXTENSION AND EDUCATION

Subtitle A—Amendments to National Agricultural Research, Extension, and Teaching Policy Act of 1977

Section 201 calls on the Secretary, when appointing members to serve on the Advisory Board, to ensure, to the maximum extent practicable, equal representation of public and private sector members. It is important to have representation by individuals from both the public and private sectors, and the Committee believes that it is important that there be equal representation.

Section 203 amends current authority for policy research centers to include grants for studies that concern the effect of trade agreements on: the farm and agricultural sectors; the environment; rural families, households and economies; and consumers, food and nutrition. The Committee is aware that trade agreements may affect the Northern Plains states differently than the U.S. as a whole due to a unique set of factors, including climate, crop mix, and marketing of agricultural commodities and products. For that reason, a policy research center could: evaluate the impact of multinational trade

policy issues and North American cross-border policies on Northern Plains agriculture; identify strategies to improve export opportunities for this region of the country; and evaluate the impacts of national and international policies on the region's agricultural competitiveness, farm income, farm structure, and rural economy.

Section 204 provides authority for competitive grants for collaborative projects among federal scientists, faculty and staff from land grant colleges and universities and other colleges and universities and scientists from international agricultural research centers in other nations. International research centers in other nations would include the international agricultural research centers of the Consultative Group on International Agricultural Research (CGIAR). These collaborative projects should: focus on creating, disseminating, and teaching the use of new technologies for increasing the production of food and fiber, developing rural communities, and strengthening markets while safeguarding the environment worldwide and enhancing global competitiveness of U.S. agriculture; be mutually beneficial to the U.S. and other countries; and encourage private sector involvement and the leveraging of private sector funds. The collaborative projects could strengthen U.S. economic competitiveness by globalizing agricultural research, extension and teaching programs at land grant universities and colleges. This section also requires a biennial report from USDA about efforts to coordinate international agricultural research within the federal government and more effectively link the activities of domestic and international agricultural researchers. The Committee believes it is important that there be a more effective link between domestic and international agriculture research. In particular, there is research conducted abroad that may have useful application here.

Subtitle B—Amendments to Food, Agriculture, Conservation, and Trade Act of 1990

Section 211 authorizes a National Agricultural Weather Information System. The Committee intends that the Secretary will delegate to the Chief Meteorologist the authority to manage the activities of NAWIS and the Chief Meteorologist will advise the Secretary on issues regarding the NAWIS. The Committee also intends that the Secretary will obtain advice regarding the operation of NAWIS from a committee within the Department of Agriculture representing the agencies that generate, process, or use agriculture weather and climate information. The Committee intends that the competitive grant program authorized in this section be administered through the Cooperative State Research Extension and Education Service.

Section 212 establishes a National Food Genome Strategy. The Committee believes that identifying, mapping and understanding the function and control of genes responsible for economically important traits in the major agriculturally important species of plants and animals and microbes will permit the U.S. to develop new genetic technologies for improvements in yield, composition, and quality of domestic agricultural production. Taking advantage of the universality of the genetic code, molecular biology permits the understanding and transfer of genes among different organisms. This section makes clear that indirect costs for food genome

research would be allowed at the same rate allowed by NSF for food genome research in an effort to ensure a level playing field for institutions seeking funding for this research. The Committee expects that the Department would carry out research on the ecological, social and legal aspects of agricultural genome research under this authority. The Committee intends that the Secretary will use the provisions of this section as guidance in funding any food genome activities, including activities funded through the Initiative for Future Agriculture and Food Systems in Section 301. The Committee is aware of efforts to obtain funding for a plant genome initiative through the National Science Foundation and is pleased that \$40 million in funding was provided in the VA, HUD and independent agencies appropriations bill for fiscal year 1998 passed by the Senate. The Committee would expect USDA to provide a level of funding (including funds currently devoted to genome research) commensurate to that provided by another agency in order for USDA to become the lead agency for a food genome initiative.

Section 213 authorizes an imported fire ant control, management and eradication program. The imported fire ant, over the last 76 years, has infested more than 275 million acres in at least thirteen states. The fire ant affects urban and rural areas and causes damage which is estimated to amount to billions of dollars annually. In Texas, fire ant damage is estimated at \$300 million a year. It is estimated that the State of Georgia loses \$46 million annually, with Louisiana, Alabama, Tennessee, and Mississippi incurring annual damage estimates of \$23.83 million, \$16 million, \$1.33 million, and \$12.33 million respectively. Homeowners in the state of Arkansas spend approximately \$106 million each year to combat fire ant infestation. The Committee is aware of the devastation that the red imported fire ant has caused in the states currently infested and encourages the Secretary to take advantage of the authority being granted to fund research projects in the states where demonstration of fire ant control methodology may produce the data needed to develop an effective method of combating this pest. Further, the Committee encourages the Secretary to consult with the Board before the grant decisions are made.

Section 214 authorizes the Secretary to award a grant to A*DEC to enable it to administer the agricultural telecommunications program. It is the Committee's intent that a cohesive, affordable, interoperable, and sustainable agricultural telecommunications network be utilized that is national in scope and that will make optimal use of the available resources for agriculture and rural America. The network must disseminate and share academic instruction, extension programming, agricultural research and domestic and international marketing information. The Committee believes that the A*DEC consortium is the only agricultural telecommunications network in the U.S. fitting this description and is in the best position to assure that all activities facilitate and strengthen agricultural extension, resident education, research and domestic and international marketing.

A*DEC is a consortium whose members include the U.S. Department of Agriculture, 46 state universities and land grant institutions, and a growing number of international associate members. A*DEC was included in the 1996 report of the National Research

Council's Board on Agriculture as an example of the type of program that should be supported as federal programs and policies are restructured to be more efficient and to use the growing power of telecommunications networking. The Committee intends that the Secretary of Agriculture, acting through A*DEC, administer a competitive grant program that uses the power and efficiency of the Internet (electronic mail and WorldWideWeb), audio and video conferencing, and printed materials. The Committee expects A*DEC to design an open process for disseminating guidelines, to encourage electronic submission of grant proposals and peer review, and to utilize an on-line report and evaluation process. These steps will assure that all aspects of the grant program are open, transparent, and will allow for reasonable time for project submission and partnership development and rapid feedback from the review process.

The Committee believes that in the past, the administration of the agricultural telecommunications program has not been as effective as it could have been in supporting a comprehensive strategy for the development of a sustainable, national and international agricultural telecommunications program. The Committee continues to support the competitive nature of this program, but intends that the funding mechanism should be altered to assure fulfillment of the statutory objectives.

Section 215 changes the AgrAbility authorization to reflect the current distribution of funds. The Committee is recommending minor technical changes to the AgrAbility Program including elimination of a separate spending authority for the national grant program in favor of a combined authorization of \$6 million, with instruction that 15 percent of total appropriations be designated for nationally-coordinated training, technical assistance, information dissemination and related activities.

Subtitle C—Amendments to Other Laws

Section 223 makes changes in eligibility for Extension Service funding under Section 3(d) of the Smith Lever Act. All colleges and universities would be eligible to compete for competitively awarded Extension Service funding. 1862 universities, 1890 universities and 1994 institutions would be eligible for noncompetitive Extension Service funding. This section also encourages USDA to enter into memoranda of understanding, cooperative agreements or reimbursable agreements with other federal agencies related to Extension activities. The Committee believes it may be more appropriate for other federal agencies to provide funding for certain Extension activities that do not clearly fall within the jurisdiction of the USDA and that these memoranda and agreements may provide additional opportunities for federal funding from other sources for the Extension Service. It is the intent of the Committee that funds provided for competitively awarded Extension Service funding not be subject to indirect cost allocation.

Section 224 fosters greater integration between extension and research at 1862 land grant institutions by requiring each institution, by fiscal year 2000, to double the percentage of extension and research federal formula funds devoted to activities that integrate research and extension or to spend 25% of their extension and research federal formula funds on activities that integrate research

and extension, whichever is less. The Secretary can reduce the minimum percentage in case of hardship, infeasibility or similar circumstance beyond the control of the state, as determined by the Secretary. This should result in greater collaboration and integration among the research and extension components within land grant institutions. The Committee encourages greater integration of research and extension both at the project and program level and in general within the institution. States must provide a description to the Secretary about how they intend to meet this integration requirement. The Committee intends that the Secretary should consult with representatives of land grant institutions when establishing appropriate definitions and management procedures to be used when implementing this section.

Section 225 makes significant changes to special grant authority. Special grants can be provided to colleges, universities, other research institutions and organizations, federal agencies, private organizations or corporations or individuals. The research would be more targeted so that it would either be focused on agricultural needs of immediate importance or on new or emerging areas of agricultural research. These terms would be defined by USDA. These research grants could also include extension and/or education components. The grantee must arrange for a scientific peer review in the case of research or a merit review in the case of extension or education. USDA will promulgate regulations setting forth criteria for the review. The Committee intends that the USDA regulations make clear that the scientific peer or merit review of the proposed grant must be independent and credible and that it not be a review conducted solely by USDA employees as is the current practice for merit review of special grants. The Committee intends that a scientific peer review or a merit review that occurs for the first year of funding would satisfy the scientific peer review or merit review requirement in the second and third year of funding provided that the proposal does not change and that the needs for the research have not changed and that other scientific discoveries have not occurred that would affect the proposal. In any case, after three consecutive years of funding, a new scientific peer review or new merit review should be conducted. The grantee must also provide to USDA a proposed plan for graduation from federal funding under the special grant authority. The Committee intends that special grants be funded for a limited time and that, at the outset, grantees must have a plan for addressing the problem to be solved with an expectation that funding would be available for a limited time. There should be thought given to how the research would be sustainable without federal funding under special grant authority. However, the Committee would not want to limit the ability of the grantee to seek competitive federal funding in the future under the NRI, the Fund for Rural America or the Initiative for Future Agriculture and Food Systems. For special grants for agricultural research needs of immediate importance, a partnership is required. In this case, the Committee intends that a partnership could be a college or university and a producer organization. For special grants for new or emerging areas of agricultural research, a partnership with two or more entities is required after a recipient has received funding for three consecutive years. In this case, the Com-

mittee intends that a partnership could include two colleges or universities and a producer organization. Competitively awarded special grants would not be subject to the partnership requirements or requirements to provide a proposed graduation plan. At the end of the year, recipients of all special grants would be required to provide USDA with a report describing the results of the research and the merit of the results. This report would be available to the public. The Committee intends that for purposes of special grants, the term agricultural research would include but not be limited to natural resource issues affecting production agriculture, the production of food and fiber, and forestry.

The Committee does not intend to restrict the authority of the Appropriations Committee to make special grants. Under this section, the Appropriations Committee would determine what special grants to fund. The grantee would arrange for a scientific peer or merit review of the project. This review would be used to improve the quality of the science or project. USDA would provide funding to grant recipients provided they met the requirements set forth in this section. At the end of the year the grantee would provide a report regarding the results of the research to USDA which would be made available to the public. The Appropriations Committee can review the report as well as the scientific peer or merit review to help it determine whether to provide additional funding in subsequent years.

These new requirements do not apply to special grant funding in fiscal year 1998. The Committee recognizes that the process for funding special grants for the current fiscal year is well underway and that special grants should be grandfathered for fiscal year 1998. The Committee encourages USDA to work quickly to promulgate needed regulations for this section since it will become effective on October 1, 1998.

Section 226 provides \$100 million in mandatory spending for the Fund for Rural America for each of fiscal years 1998 through 2002. Funding for fiscal years 1999 and 2000 had been provided in the Federal Agriculture Improvement and Reform Act of 1996. Under this section, each year \$50 million would be available for rural development and \$33 million for research with the remainder available for either rural development or research at the discretion of the Secretary.

Section 227 addresses honey research, promotion, and consumer information. The Committee strongly supports a viable beekeeping industry that provides pollination services vital to the overall agricultural economy while also providing a wide range of high quality honey products to American consumers. The Committee has included language amending the Honey Research, Promotion, and Consumer Information Act to bolster the National Honey Board's research efforts. Recent problems with parasitic mites have highlighted the need for greater research aimed at the beekeeper level. It is the intent of the Committee that interested Senators, honey industry leaders and USDA work together to develop a complete package of consensus changes to the Honey Promotion Act.

Section 228 establishes an Office of Energy Policy and New Uses within the Office of the Secretary. It is the intention of the committee that the Office of Energy and New Uses currently located with-

in the Economic Research Service be moved to the Office of the Secretary. The committee commends the work of the Office of Energy and New Uses/ERS. This work, both economic and policy, has been helpful to the development of biofuels and new uses and representing rural America on energy policy issues. However, the committee believes that policy direction for biofuels and new uses must come from the Secretary. Therefore, in order to give added emphasis to these key areas of agriculture, it is best to establish a more direct link between the Secretary and the Office of Energy and New Uses.

Subtitle D—New Programs

Section 231 contains several provisions related to biobased products. The Committee believes that biobased products made from renewable plant and animal resources, including biofuels and value-added food and non-food products, can play a key role in developing new markets for agricultural products and economic opportunities in rural America. The Committee recognizes the considerable efforts that the Department currently devotes to biobased products but feels that the Department should significantly increase its efforts to promote the development of marketable biobased products. The Committee believes that to further advance the development of biobased products the Department must coordinate efforts among the research, marketing and rural development agencies of the Department. Further, the Committee expects the Department to establish a central contact for individuals and companies seeking information on research, development and marketing of biobased products. This contact should function as an information resource regarding research, commercialization, marketing and rural development opportunities for biobased products in the Department. The Committee expects that the Department would capitalize on existing efforts to implement these recommendations.

The Committee recognizes the important need to expand research efforts in support of the development and transfer of biobased product technology. The Committee especially recognizes the need to conduct laboratory or product market research in support of moving new biobased technologies from the laboratory to the marketplace. The Committee expects the Department to work with companies to accomplish these tasks, using the resources of the Department in its own facilities and at actual manufacturing sites. The Agricultural Research Service and other entities within the Department have significant scientific expertise and research infrastructure which can be utilized and focused more effectively on the development of new biobased technologies developed by ARS, AARCC or the private sector. The Committee expects the Agricultural Research Service to form cooperative agreements with Cooperative Research and Development Agreement (CRADA) partners, and companies receiving funding through the Alternative Agriculture Research and Commercialization Corporation, the Small Business Innovation and Research program and the Biotechnology Research and Development Corporation, to conduct research on environmental impacts and lowering the production costs of new biobased products. ARS facilities may also be used to produce limited quantities of new ARS or privately developed biobased prod-

ucts for sale as a part of demand market analysis. The Committee encourages the Department to also look at development of innovative uses of byproducts from biobased products that are posing environmental problems that hamper the expansion of existing production facilities.

The Committee believes the scientific quality and credibility of the Agricultural Research Service can be improved by awarding research funds on a competitive basis. The Committee has provided an authorization for a pilot project for competitive research grants to ARS scientists. The Committee expects that ARS would use these funds to reward exceptionally creative scientists doing research on selected topics of importance. For the first three years of the pilot project the Committee directs ARS to award these competitive funds to scientists working on alternative agricultural products with promising commercial potential. While the Committee understands that ARS has limited flexibility within its current budget to award competitive funds, the Committee encourages ARS to develop a plan to implement this section which includes the development of future budget requests for these competitive funds.

Section 232 authorizes a new competitive grant program for research, education, and information dissemination projects for the development and promotion of precision agriculture. The Committee believes future advancements in productivity of the food and fiber chain will be determined by the development of systems approaches and information technologies. These management tools will make ever-growing quantities of data available to the user by enabling the almost instantaneous collection and utilization of increasingly detailed information at every point along the production and marketing chain. This systems-based, information-intensive management of the food and fiber chain is referred to as precision agriculture.

Precision agriculture holds the promise of enabling the agriculture sector to increase its productivity and competitiveness in the global market place, while minimizing the degradation of the environment and enhancing the safety and nutritious quality of our nation's food supply.

The Committee recognizes that precision agriculture tools and technologies, like so many other commercial electronic technologies, are rapidly being developed and used in farm fields across the nation. The Committee believes it is critical that the federal agricultural research community keep pace with agricultural producers and the private sector regarding these innovative and advancing electronic farm tools. It is important that the USDA research system strive to remain at the forefront of the agronomic technologies, systems and practices.

The Committee is aware that farmers and livestock producers are continually looking for ways to increase farm efficiency, productivity, profitability and environmental stewardship by using new technologies coupled with the latest conservation and environmental protection practices. It is critical that the Department of Agriculture renew its commitment to further increasing and maximizing the amount of food and fiber which can safely be produced per acre of farmland, not as an end in itself but as a means of minimizing the world's economic and environmental costs of meet-

ing domestic and global food needs. The Committee encourages federal research and education grants that promote the adoption and the use of precision agriculture technologies that can enhance human health, improve environmental stewardship and increase production agriculture efficiency, productivity and profitability.

The Committee calls upon USDA and the Department of Energy to collaborate in the funding of precision agriculture-related research and development under the auspices of the memorandum of understanding signed by the two departments in November 1995. The Committee also encourages the Environmental Protection Agency, the National Aeronautics and Space Administration and the National Academy of Sciences to enter into memoranda of understanding with USDA regarding collaborations on behalf of precision agriculture.

Also under Section 232, the Committee intends that state agricultural experiment stations and state extension services would be eligible for this funding.

Section 233 authorizes a Formosan termite eradication program. The Committee recognizes the growing threat of the Formosan termite, *Coptotermes formosanus*, to forests, crops, homes, buildings and historic structures throughout Hawaii and the southern United States, especially along the Gulf coast. Populations of this imported pest are growing exponentially because traditional protectants are ineffective. Prevention, control and damage repair costs are already estimated to be \$1 billion. To control this exotic pest, this section authorizes funds for research for the control, management, and possible eradication of the Formosan termite. Funding priority will be given to those areas with the highest historical rates of infestation.

Section 234 requires the Secretary to periodically update nutrient composition data. The Secretary must report to the Agriculture Committees the method to be used to update the data including the quality assurance criteria that will be used, the method for generating the data, and the timing for updating the data. The Committee believes that the nutrient composition database needs to reflect changes in the food supply in a timely manner. A 1993 General Accounting Office report recommended that the Secretary of Agriculture develop specific quality assurance criteria for use in evaluating food composition data obtained from others and procedures to better direct the generation of food composition data under contract. Ensuring the reliability of food consumption data is a vital part of nutrition monitoring. The Committee believes it is important that the Secretary of Agriculture implement the recommendations made by the General Accounting Office.

In addition, the Committee notes that monitoring the nation's nutrition status and food consumption is vital. The data collected are utilized for public health programs, dietary guidance, nutrition education, dietary pesticide exposure, the advancement of new food products, plants or animal breeds, and for directing federal food assistance expenditures.

Section 235 provides authority for the Secretary to contract for construction of a consolidated APHIS laboratory facility in Ames, Iowa. The Committee is concerned about the condition of the APHIS facilities in Ames, Iowa. In all, APHIS has five separate lo-

cations in Ames. The USDA Inspector General has issued a report on the inadequacy of these facilities, citing concern for the safety and health protection for both employees and the general public. This section authorizes the funds necessary to consolidate the five facilities in Ames into one new facility that meets modern biocontainment standards and the concerns of the USDA Inspector General. The bulk of the veterinary biologics industry is located within 300 miles of Ames. This consolidation would help to meet the needs of this important agricultural industry.

Subtitle E—Studies and Miscellaneous

Section 241 requires the Secretary to contract with an expert in research assessment and performance evaluation to develop and propose practical guidelines for measuring performance of federally funded agricultural research, extension and education programs. The Committee is concerned that despite the Government Performance and Results Act, no clear consensus exists about the most effective approaches to evaluate agricultural research and education. There is no clearly defined set of guidelines that can be used to evaluate performance. The result of this effort should be a consensus-based measurement framework for research, extension and education programs that would be simple to implement, easy to communicate, consistent with established goals, reliable and flexible for a range of applications, and versatile for both pre- and post-performance measurement. This work should produce a guidebook of practical guidelines and illustrations for performance measurements. Individuals with experience in assessment or performance measurement techniques should be part of this effort. Land grant university scientists as well as USDA officials implementing GPRA should have input into the development of the guidelines. Individuals representing the land grant system, USDA, private industry, non-profit food, environmental and consumer groups, and other stakeholders as deemed appropriate should also be consulted in this effort.

Section 242 calls for a National Academy of Sciences review of the Agricultural Research Service as well as the broader role of federal funding for agricultural research, extension and education. Important factors for consideration as part of the ARS review include: ARS research prioritization; ARS promotional criteria, including how they compare to academia, other federal agencies and the private sector; the ratio of bench scientists to support staff; how to prevent duplication of research conducted by ARS, colleges and universities, and other federal agencies; the appropriate mix of basic and applied research conducted by ARS; ARS overhead expense and how it compares to colleges and universities and private research institutions; and how effectively and equitably ARS has implemented the CRADA program as well as the benefits that have accrued to the government through the CRADA program. The ARS germplasm program is of particular concern to the Committee since an adequate and diverse collection of germplasm that is well maintained is important as a base for continuing research to address the future needs of the agricultural sector. It is the intent of the Committee that the National Academy of Sciences solicit the input of stakeholders in the development of this study. The Committee

encourages the NAS to consult with experts representing the perspective and priorities of lesser populated states with smaller land grant institutions. Any study of formula funding should examine the impact that changes in the funding formula would have specifically on the smaller land-grant institutions and the states they serve.

TITLE III—INITIATIVE FOR FUTURE AGRICULTURE AND FOOD SYSTEMS

Section 301 provides \$100 million in fiscal year 1998 and \$170 million for each of fiscal years 1999 through 2002 in mandatory spending for the Initiative for Future Agriculture and Food Systems. This funding will be used for research, extension or education grants to address critical emerging agricultural issues related to future food production, environmental protection or farm income or for activities carried out under the Alternative Agricultural Research and Commercialization Act of 1990. For fiscal year 1998, the Secretary shall address priority mission areas related to food genome; food safety, food technology, and human nutrition; new and alternative uses and production of agricultural commodities and products; agricultural biotechnology; and natural resource management, including precision agriculture. For subsequent fiscal years the Advisory Board may recommend new or different priority mission areas. (Under Section 102 of this bill, the Secretary is required to provide to the House and Senate Agriculture Committees a copy of the Secretary's response to an Advisory Board recommendation regarding priority mission areas.) Funds shall be awarded competitively. Federal research agencies, national laboratories, colleges or universities or private research organizations with an established and demonstrated capacity to perform research or technology transfer are eligible to compete for the funding. The Committee intends that state agricultural experiment stations and state extension services are eligible for this funding. The Committee intends that international agricultural research centers located in other nations, such as the international agricultural research centers of the Consultative Group on International Agricultural Research (CGIAR), could compete for the funding. Priority is given to projects that are multistate, multi institutional, or multidisciplinary or to projects that integrate agricultural research, extension and education. Scientific peer or merit review is required in accordance with Section 103 and stakeholder input is required in accordance with Section 102(b)(1). Matching funds from a non-federal source are required if the grant is for applied research that is commodity specific and not of national scope. The Secretary is authorized to establish one or more institutes, based on the National Institutes of Health model, to carry out all or part of the activities authorized under this section. The Committee would expect the Secretary to consult with all interested parties if the Secretary decides to pursue an institute approach. Finally, this section contains a provision targeted to smaller institutions. The Secretary is authorized to award grants under this section to ensure that the faculty of small and mid-sized institutions that have not previously been successful in obtaining competitive grants awarded under the NRI receive a portion of the grants. The Committee intends that USDA follow the EPSCOR

model in carrying out this small school provision as has been done with the NRI.

The Committee clarifies that funds made available under this section are not intended as a replacement or offset for funds appropriated for competitive grants awarded through the National Research Initiative or other authorities.

The Committee considers many critical emerging issues related to international agricultural trade important to U.S. agricultural competitiveness and farm income. The Committee considers research on non-tariff barriers, including sanitary and phytosanitary trade barriers as critical for increasing exports and farm income.

Proposals which improve food testing processes and provide training for safer and more accurate testing and quality control would be eligible to compete for funding targeted to food safety, food technology, and human nutrition.

Section 301(c)(1)(B) allows funds from the Initiative for Future Agriculture and Food Systems to be used for the Alternative Agricultural Research and Commercialization Corporation. The Corporation provides assistance to companies with products being commercialized, often requiring considerable additional research to develop the means by which a new product can be efficiently produced at a competitive cost and at a quality that allows it to be competitive in the marketplace. Broadening the use of agricultural commodities to non-food uses and to new uses of fiber can greatly increase the demand for the farmer's production and can provide significant manufacturing activity and jobs to rural areas.

The Committee recognizes the need to develop new and alternative uses for agricultural and forest products, including biofuels and value-added food and non-food products. The Committee believes that the development of alternative uses for agricultural commodities can lead to improved economic prospects in rural America and develop new markets for plant and animal products. The Committee also recognizes the need to develop new crops and new systems of agricultural production, to increase the profitability, diversity and productivity, and reduce the adverse environmental impacts of the American food and fiber production system.

The Committee is aware that the organic foods sector has grown at an average rate of 20 percent for the last seven years and more than 10,000 U.S. farms are engaged in some form of organic production. The Committee is aware of a recent study by the Organic Farming Research Foundation that found that less than one tenth of one percent of USDA research is pertinent to organic production. The Committee intends that organic production research be eligible to compete for this funding.

The Committee is concerned about the lag between the time USDA receives funds and the time grants are awarded. The Committee expects USDA to act expeditiously to award grants for this Initiative and for other competitive grant programs, including the Fund for Rural America.

TITLE IV—EXTENSION OR REPEAL OF CERTAIN AUTHORITIES; TECHNICAL AMENDMENTS

Section 402 repeals authority for certain agricultural research programs. The Committee emphasizes that, in repealing Subtitle G

of the title XIV of the Food, Agriculture, Conservation, and Trade Act of 1990, which provides authorization for funding for research on water quality issues, the Committee does not intend to signal its view that federal funding for research on water quality issues should be reduced. The Committee recognizes that water quality issues are an area of great importance to the agriculture sector and to the nation as a whole and such research should continue to receive high priority in allocating federal research funds. The Committee recognizes that excellent research has been carried out on issues relating to water quality, and fully intends for this research to continue. The Committee also recognizes that research on water quality has been and will continue to be funded under other authorities. The Committee intends that repeal of this authority have no impact on this critical research area.

OTHER ISSUES

Competitive grants through ARS

The Committee strongly encourages USDA to make use of current authority to allow ARS to make competitive grants. The Committee believes a competitive grant approach would be appropriate for research for which ARS lacks adequate or appropriate facilities or expertise. While concerns have been expressed about the cost of establishing a program within ARS to award funding competitively, the Committee suggests that CSREES could competitively award the funds for ARS and likely at less cost than normal ARS overhead expense.

Extension Service and agricultural producers

While several changes were made in the bill to address Extension Service activities, the Committee remains concerned about the ability of the Extension Service to effectively serve agricultural producers. The Committee urges the Department to require that each state's plan of work describe how the Extension Service is serving agricultural producers.

Research related to non-tariff trade barriers

The Committee recognizes the increasingly important role that international agricultural trade plays in ensuring the viability of United States agriculture. In order to thrive and be competitive in the future, farmers must increasingly rely on the development, maintenance, and expansion of new international markets for U.S. agricultural products, especially in light of recent legislative changes which require the phasing out of agricultural support programs. These changes were made to allow U.S. farmers the flexibility to compete in a global marketplace that has seen the reduction or elimination of many tariff barriers through the establishment of various international trade agreements. At the same time, the Committee is aware that many of these historical tariff barriers have been replaced with various non-tariff trade barriers to agricultural trade, such as the various sanitary and phytosanitary restrictions. The Secretary should delegate an appropriate person in the Department to receive input from representatives of agriculture, agribusiness, the Advisory Board, federal agencies con-

cerned with agricultural trade, and other stakeholders in order to help ensure that research activities in food and agricultural sciences are prioritized in a way that responds to the current and future needs of agricultural exporters, including the development of methods to identify, remove, or reduce potential and existing barriers to agricultural trade.

Forestry research

The Committee is aware that enhanced forestry research and extension activities at the nation's land-grant universities are critical to increasing productivity and improving forest management of our nation's privately held forests. Forestry research and extension are currently an integral part of the efforts of the Cooperative State Research, Education and Extension Service through programs including the McIntire-Stennis Cooperative Forestry Research program, the Renewable Resource Extension Act program, the National Research Initiative and the Fund for Rural America.

The Committee encourages the Department to expand future forestry programs and activities within CSREES to help address the increasing challenges facing our non-industrial private forests. The Committee also believes that the Forest Service should allocate a greater share of its future research budget for collaborative research conducted by the land-grant universities on issues of importance to non-industrial private forests. The Committee encourages the Department to develop new cooperative programs between CSREES, the Forest Service and the land-grant universities for forestry research and extension to address the needs of non-industrial private landowners. The Committee directs the Department to submit a report to the Committee by April 1, 1998 on its efforts and future plans for expanding forestry research and extension activities critical to our nation's non-industrial private forest resources.

Human Nutrition Research Center

The Committee directs the Secretary of Agriculture to perform a feasibility study to establish a Human Nutrition Research Center in Preventive Nutrition, Diet and Obesity at an institution that meets the following criteria: have an established clinical research program devoted to preventive nutrition, diet, and obesity, have a research center endowment by a private donation in excess of \$100 million, and which has the ability to donate a facility of at least 10,000 square feet to the Agriculture Research Service of the United States Department of Agriculture and is conducive for conducting research. The Secretary should consult with the Strategic Planning Task Force prior to conducting the feasibility study.

V. COST ESTIMATE AND REGULATORY IMPACT STATEMENT

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, September 4, 1997.

Hon. RICHARD LUGAR,
Chairman, Committee on Agriculture, Nutrition, and Forestry, U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed federal cost estimate and intergovernmental mandates statement for a bill to reauthorize, reform, and eliminate certain agricultural research programs, as ordered reported by the Committee on Agriculture, Nutrition, and Forestry on July 30, 1997.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contacts for federal costs are David Hull, Jim Langley, and Lisa Daley, and Dorothy Rosenbaum. The CBO staff contacts for intergovernmental mandates are Marge Miller and Marc Nicole. The CBO staff contact for private sector mandates is Roger Hitchner.

Sincerely,

JAMES L. BLUM
(For June E. O'Neill, *Director*).

Enclosures.

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

S. 1150—Agricultural Research, Extension, and Education Reform Act of 1997

Summary: This legislation would reauthorize, reform, or eliminate certain agricultural research, extension, and education programs, and would authorize appropriations for several new research programs over fiscal years 1998 through 2002. Assuming appropriation of the authorized or estimated amounts, implementing the bill would require about \$14 billion in discretionary spending authority over the 1998–2002 period.

The bill also would increase direct spending for the Fund for Rural America by \$300 million over fiscal years 1998 through 2002, and would appropriate funds for a new Initiative for Future Agriculture and Food Systems. Direct spending authority for this initiative would total \$780 million from 1998 through 2002. The increases in direct spending would be more than offset by reductions in administrative costs for the Food Stamp program, in expenditures for data processing by the Commodity Credit Corporation (CCC), and in rents paid on Conservation Reserve Program (CRP) contracts in exchange for permitting landowners to cut hay or graze livestock on their CRP land. Because the bill would affect direct spending, pay-as-you-go procedures would apply.

Section 227 of this bill would impose a private-sector mandate, although the effects would not exceed the threshold for such a mandate as defined in the Unfunded Mandates Reform Act of 1995 (UMRA). Section 501 contains an intergovernmental mandate that would impose significant costs on state governments.

Description of the Bill's Major Provisions: The bill consists of five titles. Title I would establish priorities, scope, and review procedures for agricultural research, extension, and education activities conducted by and for the Department of Agriculture.

Title II would establish several new research initiatives regarding, among other things, weather information systems, a food genome research strategy, precision agriculture, and eradication of fire ants and Formosan termites. Additionally, this title would provide appropriations totaling \$300 million for the Fund for Rural America for fiscal years 1998, 2001, and 2002.

Title III would establish a new Initiative for Future Agriculture and Food Systems, and would appropriate \$780 million over fiscal years 1998 through 2002 for research grants. The Secretary of Agriculture would award funding to research projects that address critical emerging issues related to future food production, environmental protection, farm income, or alternative uses of agricultural products.

Title IV would extend most of the expiring authorizations for appropriations for agricultural research, extension, and education programs through fiscal year 2002, and repeal certain agricultural research programs.

Title V would provide offsetting savings by:

- limiting the amount the Secretary could pay each state for administering the Food Stamp program;
- reducing a cap on CCC spending for automated data processing equipment, telecommunications equipment, and other information technology from \$275 million to \$193 million over fiscal years 1997 through 2002; and
- authorizing the Secretary to allow haying and grazing of the land enrolled in the CRP each year, under certain conditions, in exchange for a reduction in rental payments.

This title also would create a grant program to encourage schools and other institutions to initiate or expand their school breakfast or summer food programs; allow four meals a day to be served in the child and adult care food program and summer food program under some circumstances; and extend funding for a clearinghouse that provides information on food assistance for low-income individuals.

Estimated cost to the Federal Government: For the purposes of this estimate, CBO assumes that all amounts authorized or estimated to be authorized will be appropriated by the start of each fiscal year. The estimated budgetary impact of the bill is shown in Table 1.

TABLE 1.—ESTIMATED IMPACT ON FEDERAL SPENDING

[By fiscal year, in millions of dollars]

	1997	1998	1999	2000	2001	2002
SPENDING SUBJECT TO APPROPRIATION						
Spending Under Current Law: ¹						
Budget authority	1,698	0	0	0	0	0
Estimated outlays	1,656	641	187	43	14	0
Proposed Changes:						
Estimated authorization level	0	2,854	2,789	2,789	2,796	2,796
Estimated outlays	0	1,457	2,206	2,511	2,684	2,796

TABLE 1.—ESTIMATED IMPACT ON FEDERAL SPENDING—Continued
[By fiscal year, in millions of dollars]

	1997	1998	1999	2000	2001	2002
Spending Under The Bill: ¹						
Estimated authorization level	1,698	2,854	2,789	2,789	2,796	2,796
Estimated outlays	1,656	2,098	2,393	2,554	2,698	2,796
CHANGES IN DIRECT SPENDING						
Estimated budget authority	0	– 16	– 72	– 60	68	78
Estimated outlays	0	– 106	– 105	– 53	10	47

¹The 1997 budget authority is the amount appropriated for that year. It includes spending for the Agricultural Research Service, the Cooperative State Research Education and Extension Service, and associated buildings and facilities accounts.

The costs of this legislation fall within budget functions 300 (natural resources and environment), 350 (agriculture), 370 (commerce and housing credit), 450 (community and regional development), 550 (health), and 600 (income security).

Basis of estimate

Spending subject to appropriation

The bill would reauthorize appropriations for most expiring agricultural research, extension, and education activities and would authorize appropriations for several new activities over fiscal years 1998 through 2002. Assuming appropriation of the necessary amounts for all programs, enacting the bill would result in about \$14 billion in additional discretionary spending authority and \$11.7 billion in discretionary outlays over the 1998–2002 period.

Programs with Specific Authorized Appropriations. The bill would authorize the appropriation of specific amounts for each fiscal year from 1998 through 2002 for a number of programs and research areas. Table 2 shows the specified amounts.

Assuming appropriation of the authorized amounts for each of the above programs, enacting the bill would result in about \$11.9 billion in additional appropriations over the 1998–2002 period.

The bill also would either authorize the appropriation, or would imply an authorization, of such sums as necessary to carry out certain programs. We estimate that implementing these programs would require funding of \$2.1 billion over the 1998–2002 period. CBO's basis for estimating that sum is provided below.

National Food Genome Strategy. Section 1671 of the Food, Agriculture, Conservation, and Trade Act of 1990 directs the Secretary to conduct a research program through competitive grants to support basic and applied research and technology development in the area of plant genome structure and function. The 1990 act authorized the appropriation of such sums as necessary for fiscal years 1996 and 1997. This bill would amend the 1990 act to require the Secretary to carry out a National Food Genome Strategy to study and map agriculturally significant genes to achieve sustainable and secure agricultural production, and for other purposes. It would authorize the Secretary to enter into or make contracts, grants, or cooperative agreements for this purpose. Based on information from the Department of Agriculture (USDA), CBO estimates that carrying out the strategy would cost about \$150 million in total for fiscal years 1998 through 2002.

TABLE 2.—SPECIFIED ANNUAL AUTHORIZATIONS OF APPROPRIATIONS FOR 1998 THROUGH 2002
[In millions of dollars]

	Authorized annual amount
National Agricultural Weather Information System	15
Assistive technology for farmers with disabilities	6
Biobased products ¹	10
Eradication of Formosan termites	10
Grants and fellowships for food and agriculture education	60
Grants for production and marketing of alcohol fuels and industrial hydrocarbons	20
Expanded food and nutrition education	83
Grants to upgrade agricultural research facilities at 1890 schools, including Tuskegee University	15
National research and training centennial centers	2
Education grants for Hispanic-serving institutions	20
Existing and certain new agricultural research programs	850
Agriculture experiment stations	310
Extension education	460
Aquaculture assistance program	8
National Rural Information Clearing House	1
Competitive, Special, and Facilities Research Grant Act	500
1994 schools ²	5
1994 schools for institution building grants ²	2
National Aquaculture Act of 1980	3
Agricultural telecommunications program	12

¹ For 1999 through 2002 only.

² For 2001 and 2002 only.

Imported Fire Ant Control, Management, and Eradication. The bill would establish a multistage program to control, manage, and eradicate imported fire ants. The bill would authorize the Secretary to award grants totaling \$6 million annually to specified entities for the purpose of research and demonstration projects related to controlling fire ants. The bill would authorize the Secretary to award subsequent grants of up to \$4 million per year for two years to each of the most promising projects funded by the initial grants. After an evaluation of these projects, the bill would authorize the Secretary to award a \$5 million grant to the sponsor or sponsors of the best project to develop a national strategy for the control of fire ants. The bill would authorize such sums as necessary to carry out this program. CBO estimates that implementing this section would require appropriations of \$24 million over the 1998–2002 period, with another \$41 million required through 2006.

Office of Energy Policy and New Uses. The bill would amend the Department of Agriculture Reorganization Act of 1994 to require the Secretary to establish an Office of Energy Policy and New Uses in the Office of the Secretary. Based on information from USDA regarding expenditures for other similar offices, CBO estimates that this new office would require the appropriation of about \$3 million over the period 1998–2002.

Precision Agriculture. The bill would authorize the Secretary to make competitive grants to eligible entities to carry out research, education, and information dissemination projects for the development and promotion of precision agriculture. The legislation would authorize such sums as necessary for each fiscal year from 1998 through 2002. Based on information from USDA and assuming appropriation of the necessary amounts, CBO estimates that implementing this provision would cost \$5 million a year.

Nutrient Composition Data. The bill would require the Secretary to update, on a periodic basis, nutrient composition data, and to report to the Congress within 180 days a to the intended methodology, quality assurance criteria, and timing for making the updates. CBO estimates that additional appropriations of \$2 million annually would be required for this project.

Consolidated Administrative and Laboratory Facility. The bill would authorize the Secretary, in consultation with the Administrator of General Services, to enter into contracts for the design, construction and operation of a consolidated administrative and laboratory facility of the Animal and Plant Health Inspection Service (APHIS) to be located in Ames, Iowa. The bill would authorize the appropriation of such sums as necessary, to remain available until expended. Based on information from USDA officials, CBO estimates that this project would cost \$80 million over four fiscal years.

National Swine Research Center. The bill would authorize the Secretary, subject to the availability of appropriated funds or through a reprogramming of funds provided for swine research, to accept as a gift and administer the National Swine Research Center located in Ames, Iowa. Based on information provided by USDA, CBO estimates operation of the research center would require an appropriation of \$10 million annually beginning in 1998.

Evaluation and Assessment of Agricultural Research, Extension, and Education Programs. The legislation would require the Secretary to enter into a contract with an expert in research assessment to evaluate federally funded agricultural research, extension, and education programs and to determine whether they result in public goods that have national or multistate significance. The contractor would develop and proposes practical guidelines consistent with the Government Performance and Results Act of 1993 for measuring performance of federally funded agricultural research, extension, and education activities. Based on information regarding similar contracts, CBO estimates that such an evaluation would require total expenditures of less than \$500,000.

Study of Federally Funded Agricultural Research, Extension, and Education. The bill would require the Secretary to request that the National Academy of Sciences study the role and mission of federally funded agricultural research, extension, and education, and report the results to the Congress within a specified time frame. CBO estimates that completing this study would cost about \$1 million, assuming appropriation of necessary funds.

Other Programs. The bill would continue several existing program and authorize such sums as necessary for the 1998–2002 period. For the purposes of this estimate, CBO assumes that the necessary appropriations for research on animal health and rangeland, policy research centers, human nutrition intervention, health promotion research, the national genetic research program, the study of changes in global climate, activities under the Critical Agricultural Materials Act, the Research Facilities Act, and the Renewable Resources Extension Act, and the planning, construction, acquisition, and repair of buildings would be equivalent to the 1997 appropriation for these programs and activities. Estimated funding totals \$1.8 billion for the 1998–2002 period.

Direct spending

The bill would provide an additional \$300 million in spending authority over the 1998–2002 period for the Fund for Rural America. It also would provide \$780 million over the 1998–2002 period for a new Initiative for Future Agriculture and Food Systems. In addition, the bill would increase Child Nutrition spending by \$142 million over the same period.

To offset these increases in direct spending, the bill would limit administrative costs of the Food Stamp program, resulting in savings of \$1.1 billion over the 1998–2002 period. The bill also would limit CCC spending for information technology (\$82 million in savings over the period), and authorize the Secretary, under certain conditions, to allow haying and grazing of the land enrolled in the CRP in exchange for a reduction in rental payments (\$20 million in savings over the period).

Fund for Rural America. The Federal Agriculture Improvement and Reform Act of 1996 established the Fund for Rural America to provide funds for agricultural research and rural development. That act appropriated \$100 million for each of fiscal years 1997, 1999, and 2000 (although \$20 million was later rescinded in 1997). This bill would appropriate \$100 million for each of fiscal years 1998, 2001, and 2002, for an increase in direct spending authority of \$300 million through 2002. Assuming the Secretary allocates funds across research and rural development programs in proportions similar to the 1997 allocation, CBO estimates that spending for these purposes would increase by \$200 million through 2002, as shown in Table 3.

TABLE 3.—ESTIMATED SPENDING FOR THE FUND FOR RURAL AMERICA

[By fiscal year, in millions of dollars]

	1997	1998	1999	2000	2001	2002
Fund for Rural America Spending Under Current Law:						
Budget authority	80	0	100	100	0	0
Estimated outlays	21	32	51	74	57	32
Proposed Changes:						
Budget authority	0	100	0	0	100	100
Estimated outlays	0	34	33	22	42	69
Fund for Rural America Spending Under the Bill:						
Budget authority	80	100	100	100	100	100
Estimated outlays	21	66	84	96	99	101

Initiative for Future Agriculture and Food Systems. Title III of the bill would create the Initiative for Future Agriculture and Food Systems to provide funds for agricultural research. The bill would appropriate to the fund \$100 million for fiscal year 1998 and \$170 million for each of fiscal years 1999 through 2002, for an increase in direct spending authority of \$780 million through 2002. Assuming the Secretary awards these funds for research grants as authorized, CBO estimates that spending for this purpose would be \$663 million through 2002 (see Table 4).

Child Nutrition Programs. The bill would restore several features of the Child Nutrition programs that were changed by last years' welfare bill, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA). The changes would result in increased outlays of \$9 million in 1998 and \$142 million over the

1998–2002 period. Table 5 shows the federal budgetary effects of the bill on Child Nutrition programs.

TABLE 4.—ESTIMATED SPENDING ON THE INITIATIVE FOR FUTURE AGRICULTURE AND FOOD SYSTEMS

[By fiscal year, in millions of dollars]

	1997	1998	1999	2000	2001	2002
Spending Under Current Law for the Initiative for Future Agriculture and Food Systems:						
Budget authority	0	0	0	0	0	0
Estimated outlays	0	0	0	0	0	0
Proposed Changes:						
Budget authority	0	100	170	170	170	170
Estimated outlays	0	51	116	156	170	170
Spending Under the Bill for the Initiative for Future Agriculture and Food Systems:						
Budget authority	0	100	170	170	170	170
Estimated outlays	0	51	116	156	170	170

TABLE 5.—ESTIMATED SPENDING ON CHILD NUTRITION PROGRAMS

[Outlays, by fiscal year, in millions of dollars]

	1997	1998	1999	2000	2001	2002
Spending Under Current Law for the Child Nutrition Programs	8,221	8,474	8,895	9,353	9,829	10,314
Proposed Changes	0	9	31	36	33	33
Spending Under the Bill for Child Nutrition Programs	8,221	8,483	8,926	9,389	9,862	10,347

The bill would restore funding for grants to pay for nonrecurring expenses that schools and other institutions face in initiating or expanding their school breakfast or summer food programs. The bill would provide \$5 million each year for such grants. (CBO estimates that outlays for these grants would be \$3 million in fiscal year 1998 and \$5 million in each succeeding year.) CBO estimates that more meals would be served in the breakfast and summer programs because of the start-up grants, resulting in an additional increase in outlays of \$6 million in 1998, rising to \$14 million in 2000, then declining to \$11 million in 2002.

The bill also would return to the pre-PRWORA policy that allowed four meals a day (instead of three) to be served in child care centers under the child and adult care food program and the summer food program under some circumstances. Effective September 1, 1998, a child care center could serve four meals to children that are in child care for eight or more hours a day. Similarly, a summer program that is a camp or that serves meals primarily to migrant children would also be allowed to serve four meals a day. CBO estimates that the extra meals, predominantly snacks, would result in increased outlays of less than \$500,000 in fiscal year 1998, \$16 million in fiscal year 1999, and \$17 million in later years.

Finally, the bill would increase funding for information clearinghouses under the National School Lunch Act, resulting in increased outlays of \$1 million over the 1998–2002 period.

Administrative Costs of the Food Stamp Program. The bill would cap the amounts that states could obtain from the federal government for administering the Food Stamp program. The aggregated

level of all states' caps would be below the amount CBO estimates states would otherwise seek for administering the program, lowering federal Food Stamp outlays by between \$310 million and \$420 million a year over the 1998–2002 period. As discussed below, CBO estimates that over \$100 million of this amount each year would be offset by increased Medicaid outlays, resulting in net savings of \$200 million in 1998, rising to \$280 million in 1999, and then declining to \$190 million in 2002. Table 6 shows the estimated federal budgetary effects of this provision.

Background. Under current law, the states administer the Food Stamp program and the federal government reimburses them for half of all administrative costs. The largest component of administrative costs is the cost of certifying eligible households. Other components include cost of issuing food stamps, computer operations, and fraud control. States also administer many other public benefit programs, such as Medicaid, cash assistance for families with children (previously Aid to Families with Dependent Children (AFDC), now Temporary Assistance for Needy Families (TANF)), Child Support Enforcement, Foster Care, and in some states, general assistance. The federal government matches the states' administrative expenses for all of these programs except state-funded general assistance.

TABLE 6.—ESTIMATED FEDERAL BUDGETARY EFFECTS OF CHANGES IN ADMINISTRATIVE COSTS OF THE FOOD STAMP PROGRAM
[Outlays by fiscal year, in millions of dollars]

	1997	1998	1999	2000	2001	2002
Estimated Spending Under Current Law:						
Food stamp administration ¹	2,045	2,408	2,556	2,640	2,706	2,719
Medicaid administration	4,419	5,052	5,548	6,113	6,625	7,192
Proposed Changes:						
Food stamp administration	0	– 310	– 420	– 370	– 320	– 310
Medicaid administration	0	110	140	130	120	120
Estimated Spending Under the Bill:						
Food stamp administration	2,045	2,098	2,136	2,270	2,386	2,409
Medicaid administration	4,419	5,162	5,688	6,243	6,745	7,312

¹ Includes the effects of Public Law 105–33, the Balanced Budget Act of 1997, on the Food Stamp Employment and Training program.

Because of the overlap in eligible populations, states often undertake administrative activities that benefit more than one program. For example, when a household applies for TANF, Medicaid, and food stamps, collecting information on the household's income is necessary for all programs and is usually done during a combined eligibility interview. The process of allocating shared administrative costs among various state and federal programs is known as cost allocation. The general rules for allocating costs are prescribed by regulation in OMB Circular A–87. These rules require that costs that are incurred for more than one program be allocated based on the extent to which the various programs benefit from the activity. Under this logic, a cost that is equally necessary for more than one program should be shared equally by the programs.

The history of the public welfare programs led to an exception to this general cost allocation rule. All costs that were identified as shared costs were allocated to AFDC because AFDC existed first. When Congress later created Medicaid and Food Stamps, it as-

sumed that large portions of the administrative work for households that received AFDC was already done for AFDC and that these newer programs could piggy-back on that work. For cases that received AFDC, food stamps, and Medicaid, the Food Stamp and Medicaid programs paid only the cost of the work that was over and above what was required for AFDC. Because the federal match rate was generally 50 percent in all three programs, the amount that the federal government paid was the same, regardless of whether it was considered a joint cost (and thus claimed under the AFDC program) or a cost allocated to one of the individual programs.

Effect of PRWORA. Last summer's welfare law, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), replaced the AFDC program with the TANF block grant program. Under AFDC, the federal government and the states had shared the entitlement costs of cash benefits, administrative costs, emergency assistance, and the Job Opportunities and Basic Skills Training (JOBS) program. PRWORA repealed these programs and replaced them with a federal block grant that states can use as they choose, within wide boundaries, for serving needy families. The amount for the block grant was based on recent historical federal spending for the repealed components of AFDC. Therefore, although the amount states will spend on administrative expenses is not dictated by federal law (except that it cannot exceed 15 percent of the block grant amount), the amount that was implicitly included in the TANF block grant based on pre-1996 spending was predicated on the cost allocation method discussed above, where AFDC paid for the administrative costs that benefitted all the various programs.

The repeal of AFDC and institution of TANF affected the allocation of administrative costs in two ways. First, states now have the incentive to maximize the administrative costs attributed to Medicaid or Food Stamps, where they can still receive a 50 percent match, and minimize TANF expenses so that those funds can be used for other purposes. Second, with AFDC abolished, the legislative history that gave AFDC special treatment for cost allocation purposes may be obsolete, and the Congress did not specify how shared costs should be treated under TANF.

CBO's March 1997 baseline. In estimating spending under current law for CBO's March 1997 baseline, CBO assumed that states will begin to draw down more Food Stamp and Medicaid administrative funds than they have in the past for the two reasons outlined above: they will maximize the amount of administrative costs that they attribute to Medicaid or Food Stamps, and they will seek to revise their cost allocation plans so that all programs that benefit from joint activities share in the costs, instead of TANF paying all of the shared costs. The March 1997 estimates of Food Stamp and Medicaid spending are each about \$250 million higher in fiscal year 1997 and about \$500 million higher in later years than they would have been without these assumptions.

In fiscal year 1996 states received over \$1.8 billion in federal matching funds for administering the Food Stamp program. CBO currently estimates that this amount will increase to \$2.0 billion

fiscal year 1997, \$2.4 billion in fiscal year 1998, and \$2.7 billion in fiscal year 2002.

Effect of this bill. The bill would cap each state's allowable Food Stamp administrative costs at a level that, when aggregated, is lower than CBO's March 1997 estimates of current law spending. States would still draw down federal money at the 50-percent-match rate up to the cap, and then would receive no additional match for costs above the cap. In 1998 the cap level would be 110 percent of the amount the state received in fiscal year 1996. In later years the cap would be 115 percent of the fiscal year 1996 amount, adjusted for inflation and for changes in the number of households participating in the Food Stamp program. CBO estimates that the sum of cap levels across all the states would be between \$350 million and \$440 million lower than what states would otherwise have received if the federal administrative funds remained open-ended. The cap amounts would be larger, however, by between \$70 million and \$200 million a year, than the amounts states likely would have received if AFDC had not been replaced with TANF.

CBO further assumes that under the bill states would change some practices and reallocate their administrative costs to draw down more money under Medicaid, which would be the largest remaining program that serves low-income families and retains an open-ended match for administrative costs. CBO assumes the states would receive a federal match under Medicaid for one-third of the amount that would no longer be reimbursable under Food Stamps, resulting in increased Medicaid outlays of between \$110 million and \$140 million a year.

Three components of federal payments to states would be exempt from the cap—employment and training costs of initiating new computer systems, and enhanced funding for states with low error rates. In two of these areas, employment and training and computer systems, CBO expects that spending would grow faster under the bill than under current law because states would have an incentive to modify their behavior and procedures to draw down the open-ended funds. CBO estimates that federal spending for these two components of administrative costs would increase by \$10 million in 1998 and \$50 million in 2002. The third area, enhanced funding, would not necessarily increase under the bill because only a few states received these funds each year based on their low error rates. The bill would not change those rules.

CBO does not expect that the limitation on federal administrative funds would cause increases in Food Stamp benefits because of administrative errors. CBO assumes that states would use their own funds or TANF funds to make up the loss in federal funds, so that the total resources devoted to the administration of welfare programs would not be significantly different under the bill.

Information Technology Funding. The bill would amend the CCC Charter Act to reduce the total amount that the CCC can spend for information technology from \$275 million to \$193 million over the 1997–2002 period. CBO estimates that this provision would reduce CCC outlays by \$82 million from 1998 through 2002. We estimate the lower limit would mean that funds available for information

technology would be exhausted by 2000, leaving no funds available for 2001 and 2002.

TABLE 7.—ESTIMATED SPENDING BY THE COMMODITY CREDIT CORPORATION ON INFORMATION TECHNOLOGY

[Outlays, by fiscal year, in millions of dollars]

	1997	1998	1999	2000	2001	2002
CCC Information Technology Spending Under Current Law	55	66	39	55	30	30
Proposed Changes	0	0	0	-22	-30	-30
CCC Information Technology Spending Under the Bill	55	66	39	33	0	0

Haying and Grazing on Conservation Reserve Land. The CRP is a long-term land retirement program of the CCC, whereby USDA pays landowners an annual rent in return for planting beneficial cover crops and retiring the land from farming. These cover crops may have a value as livestock feed if they were to be cut for hay, or if livestock were to be allowed to graze in the covered fields. Indeed, current law provides that under emergency conditions the Secretary may allow haying and grazing of the CRP. This bill would amend the Food Security Act of 1985 to permit holders of CRP contracts to hay and graze up to a third of their land enrolled in the CRP. Annual rental payments on such land would be reduced commensurately with the value of the hay or forage removed. The legislation would eliminate current authority for haying and grazing of CRP land under certain emergency situations. CBO estimates the CRP provisions would reduce federal outlays by \$5 million per year, beginning in 1999.

The ability to hay and graze up to a third of CRP land each year would encourage some producers to establish a rotational haying and grazing management plan. This is not currently possible because the CRP can be hayed or grazed only when the Secretary declares a county an emergency area. However, the bill also would give the Secretary authority to ensure that the haying and grazing remains consistent with the purposes of the CRP program, for example, by limiting the time of year haying or grazing could take place so as not to interfere with wildlife nesting and by imposing other restrictions. Such restrictions have accompanied emergency haying and grazing declarations in the past. Also, it is not clear what method USDA would use to determine the value of forage removed from CRP land. Based on available historical information and information from USDA, CBO estimates that around 1.3 million acres of CRP land would be hayed and grazed each year under this provision, with a reduction in rental payments on those acres of about 25 percent.

TABLE 8.—ESTIMATED EFFECTS OF THE BILL ON SPENDING FOR THE CONSERVATION RESERVE PROGRAM

[Outlays by fiscal year, in millions of dollars]

	1997	1998	1999	2000	2001	2002
Spending for the Conservation Reserve Program Under Current Law	1,675	1,783	1,751	1,794	1,766	1,752
Proposed Changes	0	0	-5	-5	-5	-5

TABLE 8.—ESTIMATED EFFECTS OF THE BILL ON SPENDING FOR THE CONSERVATION RESERVE PROGRAM—Continued

[Outlays by fiscal year, in millions of dollars]

	1997	1998	1999	2000	2001	2002
Spending for the Conservation Reserve Program Under the Bill	1,675	1,783	1,746	1,789	1,761	1,747

Pay-as-you-go considerations: The Balanced Budget and Emergency Deficit Control Act of 1985 specified pay-as-you-go procedures for legislation affecting direct spending or receipts. The projected changes in direct spending are shown in Table 9 for fiscal years 1998–2007. For purposes of enforcing pay-as-you-go procedures, however, only the effects in the budget year and the succeeding four years are counted.

CBO estimates that enacting H.R. 1596 would decrease direct spending by about \$106 million in fiscal year 1998 and by \$532 million over the 1998–2007 period. This net savings occurs because the projected decline in spending from changes in nutrition programs, on CCC information technology, and on the CRP offsets the estimated increase in spending from appropriations for the Fund for Rural America and the Initiative for Future Agriculture and Food Systems.

TABLE 9.—SUMMARY OF PAY-AS-YOU-GO EFFECTS

[By fiscal years, in millions of dollars]

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Changes in outlays:										
Fund for Rural America	34	33	22	42	69	56	30	10	3	1
Initiative for Future Agriculture and Food Systems	51	116	156	170	170	83	34	0	0	0
Nutrition Programs and Medicaid	–191	–249	–204	–167	–157	–143	–125	–106	–96	–72
Commodity Credit Corporation	0	–5	–27	–35	–35	0	0	0	0	0
Total	–106	–105	–53	10	47	–4	–61	–96	–93	–71
Changes in receipts. ¹										

¹ Not applicable.

Estimated impact on State, local, and tribal governments: CBO has determined that the section affecting reimbursements to states for administrative costs of the Food Stamp program imposes intergovernmental mandates as defined in the Unfunded Mandates Reform Act of 1995 (UMRA) and would impose additional costs on state governments. CBO's analysis of this mandate is contained in a separate statement.

Estimated impact on the private sector: This bill would impose a private-sector mandate by specifying the use of assessments collected by the National Honey Board from producers and importers of honey. Section 227 would require that at least 8 percent of the assessments collected be used for research to “advance the cost-effectiveness, competitiveness, efficiency, pest and disease control,

and other management aspects of beekeeping and honey production.”

The Secretary of Agriculture formed the National Honey Board to administer the Honey Research, Promotion, and Consumer Information Order. Honey producers and importers approved that order by referendum in 1986. The Honey Board conducts research, advertising, and promotions to promote the use of U.S. honey. An assessment of one-cent per pound on domestic production and imports of honey is the Board’s primary source of funds. Assessments total about \$3.1 million per year.

The bill would require that nearly \$250,000 of the assessments be reserved annually for the specified research, which the board does not now fund. Thus, the cost would not exceed the statutory threshold for private-sector mandates (\$100 million, adjusted annually for inflation) in any year.

Estimate prepared by: Federal Costs: Nutrition Programs: Dorothy Rosenbaum; Rural Development: Lisa Daley; and Agriculture: Dave Hull and Jim Langley.

Impact on State, Local, and Tribal Governments: Marge Miller and Marc Nicole.

Impact on the Private Sector: Roger E. Hitchner.

Estimate approved by: Robert A. Sunshine, Deputy Assistant Director for Budget Analysis.

CONGRESSIONAL BUDGET OFFICE INTERGOVERNMENTAL MANDATES
STATEMENT

S. 1150—Agricultural Research, Extension, and Education Reform Act of 1997

Summary: This legislation would reauthorize, reform, or eliminate certain agricultural research, extension, and education programs, and would authorize appropriations for several new ones. These programs operate largely through grants to colleges and universities. The bill also includes provisions that would authorized federal spending for grants to state and tribal institutions, and others that would impose new conditions for the receipt of these grants.

The bill includes a provision (section 501) that would limit the amount the Secretary of Agriculture would pay each state for administering the Food Stamp program. Section 501 would impose an intergovernmental mandate, as defined in the Unfunded Mandates Reform Act of 1995 (UMRA), because it would reduce the federal share of a major entitlement program. CBO estimates that the net direct costs to states of this mandate would be \$200 million in 1998 and \$1.1 billion for the 1998–2002 period. These amounts exceed the threshold for intergovernmental mandates specified in UMRA.

Intergovernmental mandates contained in bill: Section 501 would limit the federal government’s responsibility to provide funding to states for administrative costs of the Food Stamp program. Section 421(5)(B)(ii) of UMRA provides that imposing a cap on federal funding for certain entitlement programs, including the Food Stamp program, is a mandate if the state, local, or tribal governments that participate in the program lack the authority to amend their financial or programmatic responsibilities to continue provid-

ing required services that are affected by the legislation. Because states have limited authority to amend their programmatic responsibilities under the Food Stamp program, CBO has determined that the cap imposed by section 501 would constitute a mandate.

Estimated direct costs of mandates to State, local, and tribal governments: The statutory threshold (\$50 million in 1996, adjusted annually for inflation) is exceeded.

Total direct costs of mandates: CBO estimates that the direct costs of the intergovernmental mandate on state, local, and tribal governments are as follows:

[By fiscal year, in millions of dollars]

	1998	1999	2000	2001	2002
Net direct costs	200	280	240	200	190

Basis of estimate: Background. Under current law, the state administer the Food Stamp program and the federal government reimburses them for half of all administrative costs. The largest component of administrative costs is the cost of certifying eligible households. Other components include costs of issuing food stamps, computer operations, and fraud control. States also administer many other public benefit programs, such as Medicaid, cash assistance for families with children (previously Aid to Families with Dependent Children (AFDC), now Temporary Assistance for Needy Families (TANF)), Child Support Enforcement, Foster Care, and in some states, general assistance. The federal government matches states' administrative expenses for all of these programs except state-funded general assistance.

Because of the overlap in eligible populations, states often undertake administrative activities that benefit more than one program. For example, when a household applies for TANF, Medicaid, and food stamps, collecting information on the household's income is necessary for all programs and is usually done during a combined eligibility interview. The process of allocating shared administrative costs among various state and federal programs is known as cost allocation. The general rules for allocating costs are prescribed by regulation in OMB Circular A-87. These rules require that costs that are incurred for more than one program be allocated based on the extent to which the various programs benefit from the activity. Under this logic, a cost that is equally necessary for more than one program should be shared equally by the programs.

The history of the public welfare programs led to an exception to this general cost allocation rule. All costs that were identified as shared cost were allocated to AFDC because AFDC existed first. When Congress later created Medicaid and Food Stamps it assumed that large portions of the administrative work for households that received AFDC was already done for AFDC and that these newer programs could piggy-back on that work. For cases that received AFDC, food stamps, and Medicaid, the Food Stamp and Medicaid programs paid only the cost of the work that was over and above what was required for AFDC. Because the federal match rate was generally 50 percent in all three programs, the amount that the federal government paid was the same, regardless of whether it was considered a joint cost (and thus claimed under

the AFDC program) or a cost allocated to one of the individual programs.

Effect of PRWORA. Last summer's welfare law, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), replaced the AFDC program with the TANF block grant program. Under AFDC, the federal government and the states had shared the entitlement costs of cash benefits, administrative costs, emergency assistance, and the Job Opportunities and Basic Skills Training (JOBS) program. PRWORA repealed these programs and replaced them with a federal block grant that states can use as they choose, within wide boundaries, for serving needy families. The amount for the block grant was based on recent historical federal spending for the repealed components of AFDC. Therefore, although the amount states will spend on administrative expenses is not dictated by federal law (except that it cannot exceed 15 percent of the block grant amount), the amount that was implicitly included in the TANF block grant based on pre-1996 spending was predicated on the cost allocation method discussed above, where AFDC paid for the administrative costs that benefitted all the various programs.

The repeal of AFDC and institution of TANF affected the allocation of administrative costs in two ways. First, states now have the incentive to maximize the administrative costs attributed to Medicaid or Food Stamps, where they can still receive a 50 percent match, and minimize TANF expenses so that those funds can be used for other purposes. Second, with AFDC abolished, the legislative history that gave AFDC special treatment for cost allocation purposes may be obsolete, and the Congress did not specify how shared costs should be treated under TANF.

CBO's March 1997 Baseline. In estimating spending under current law for CBO's March 1997 baseline, CBO assumed that states will begin to draw down more Food Stamp and Medicaid administrative funds than they have in the past for the two reasons outlined above: they will maximize the amount of administrative costs that they attribute to Medicaid or Food Stamps, and they will seek to revise their cost allocation plans so that all programs that benefit from joint activities share in the costs, instead of TANF paying all the shared costs.

Effect of this bill. The bill would cap each state's allowable Food Stamp administrative costs at a level that, when aggregated, is lower than CBO's March 1997 estimates of current law spending. States would still draw down federal money at the 50-percent-match rate up to the cap, and then would receive no additional match for costs above the cap. In 1998 the cap level would be 110 percent of the amount the state received in fiscal year 1996. In later years the cap would be 115 percent of the fiscal year 1996 amount, adjusted for inflation and for changes in the number of households participating in the Food Stamp program. As a result, states would receive less administrative funding under the Food Stamp program than they would otherwise receive if the federal contribution remained open-ended. However, CBO anticipates that spending on certain other expenses exempt from the cap on Food Stamp administrative costs (such as employment and training and initiation of new computer systems) would increase under the bill.

CBO estimates that states on balance would lose Food Stamp funding totaling \$310 million in fiscal year 1998 and \$1.7 billion over the 1998–2002 period.

CBO expects that states would minimize their losses under the bill by changing some practices and reallocating their administrative costs to draw down more money under Medicaid, which retains an open-ended match for administrative costs. CBO estimates that states would collect an additional \$110 million in fiscal year 1998 and \$600 million over the 1998–2002 period. Thus, the net cost of the mandate would be \$200 million in fiscal year 1998 and \$1.1 billion for the five-year period beginning in 1998.

Appropriation or other Federal financial assistance provided in bill to cover mandate costs: None.

Other impacts on State, local, and tribal governments: Agricultural Research, Extension, and Education Programs. This bill would extend the authorization of appropriations for federal agricultural research, extension, and education programs through fiscal year 2002. It would also create several new programs and repeal certain existing ones. A large part of the funds authorized by this bill would be spent on grants to state and tribal institutions, mostly colleges and universities. The bill imposes new conditions on the use of this assistance, however.

The primary result of these new conditions would be to redirect the uses of federal funds by grantees. Section 205 of this bill would limit indirect costs charged to certain competitive research, extension, or education grants to no more than 25 percent total federal funds. Section 105 would require land-grant colleges and universities to use a minimum percentage of funds provided under other programs for activities that integrate cooperative research and extension. Finally, section 224 would require that states use a minimum percentage of their cooperative extension funds for multistate activities. The extent to which the latter two provisions lead to a significant change in funded activities would depend on how the USDA would define the terms and what types of activities it would accept as counting towards these goals. The cost of these provisions would also depend on what specific requirements USDA would impose on grant recipients to document their compliance.

Other provisions would require scientific peer review or merit review of activities funded by this bill. Institutions that receive agricultural research or extension funds would be required to establish a process for merit review of funded activities. Based on information provided by state officials, CBO estimates that these requirements would not impose significant new costs on grant recipients. These institutions generally follow procedures that would comply with these provisions. They could face additional burdens if the specific requirements imposed by USDA's implementing regulations were to differ significantly from current practice.

Child Nutrition. The bill would authorize funding totaling \$5 million annually for startup and expansion costs associated with the school breakfast and summer food service programs. Because it would increase funding for Child Nutrition programs, the bill would also add to the amount that states receive from the federal government for administering such programs by less than \$0.5 million annually beginning in fiscal year 2000.

Estimate prepared by: Marc Nicole and Marjorie Miller.

Estimate approved by: Robert A. Sunshine, Deputy Assistant Director for Budget Analysis.

VI. SECTION-BY-SECTION ANALYSIS

Sec. 1. Short Title; Table of Contents. The Act's title is the Agricultural Research, Extension, and Education Reform Act of 1997.

Sec. 2. Definitions. This section contains definitions for terms used throughout the bill, including "1862", "1890" and "1994" Institutions, "Advisory Board," "Department," "Hatch Act of 1887," "Secretary," "Smith-Lever Act," and "Stakeholder."

TITLE I—PRIORITIES, SCOPE, AND REVIEW OF AGRICULTURAL RESEARCH, EXTENSION, AND EDUCATION

Sec. 101. Standards for Federal Funding of Agricultural Research, Extension, and Education. This section requires the Secretary to ensure that agricultural research, extension or education activities conducted by ARS or on a competitive basis by CSREES address concerns that are high priority and have national or multi-state significance.

Sec. 102. Priority Setting Process. This section requires the Secretary to establish priorities for agricultural research, extension and education activities conducted by or for the Department. In establishing these priorities, the Secretary must solicit and consider input and recommendations from stakeholders. The Secretary must notify the Advisory Board in writing regarding the implementation of its recommendations and must send copies of the letter to the Senate and House Agriculture Committees regarding the recommendations of the Advisory Board if the recommendations are regarding the priority mission areas under the Initiative for Future Agriculture and Food Systems.

This section also requires the 1862, 1890 and 1994 institutions to establish and implement a process for obtaining stakeholder input concerning the uses of Federal formula funds and the Secretary is directed to establish regulations on the requirements for complying with the stakeholder input requirement and the consequences of not complying. The section also adds a list of management principles for research, extension and education funded by the Department.

Sec. 103. Relevance and Merit of Federally Funded Agricultural Research, Extension, and Education. This section requires the Secretary to establish procedures that ensure scientific peer review of each agricultural research grant funded, on a competitive basis, by CSREES. This section also requires the Secretary to establish procedures that ensure merit review of each agricultural extension or education grant funded, on a competitive basis, by CSREES.

This section requires the Advisory Board to perform an annual review of the relevancy of the Department's agricultural research, extension and education funding portfolio in relation to the Secretary's priorities established under section 102. The results of this review are to be considered when formulating requests for proposals for the next fiscal year, if the results are available then. The Secretary is also required to solicit and consider input from stake-

holders on the prior year's request for proposals when formulating a request for proposals for a new year.

The section requires the Secretary to establish procedures to ensure scientific peer review of ARS research activities and the research of each scientist employed by ARS at least once every 5 years by a review panel to verify that the activities have scientific merit and relevance to the Secretary's priorities as well as national or multistate significance. The review panel under this section is to be comprised of individuals with scientific expertise, a majority of whom are not employees of ARS. The results of these reviews are to be transmitted to Congress and the Advisory Board.

The 1862 and 1890 Institutions are required to establish and implement a process for merit review in order to obtain agricultural research or extension funds and 1994 Institutions are required to establish and implement a merit review process in order to receive extension funds from the Secretary. (This section also repeals outdated authority of the Secretary to withhold formula funds.)

Sec. 104. Research Formula Funds for 1862 Institutions. This section amends the Hatch Act to require that not less than 25 percent of a State's Hatch Act funds will be used for projects in which a state agricultural experiment station, working with another agricultural experiment station, ARS, or a college or university, cooperates to solve multistate problems utilizing multidisciplinary approaches. This research will be subject to scientific peer review. A project reviewed under this section will also be deemed to have satisfied the merit review requirements of section 103.

Sec. 105. Extension Formula Funds for 1862 Institutions. This section amends the Smith-Lever Act by requiring that a certain percentage of Smith-Lever (b) and (c) funds going to a State be used for cooperative extension activities in which 2 or more states cooperate to solve problems that concern more than one State. In order to determine the applicable percentage, the Secretary shall determine the percentage of Federal formula funds that a State spent for fiscal year 1997 for multistate activities. Then starting in fiscal year 2000, the applicable percentage will be 25 percent or twice the percentage determined to be spent on multistate activities in 1997, whichever is less. The Secretary is given the authority to reduce the minimum percentage required in a case of hardship, infeasibility or other similar circumstance beyond the control of the State.

The States are to include in their plans of work the manner in which they will meet the applicable percentage requirement. State and local matching funds are not subject to the percentage requirement. This section also imposes a merit review requirement for these funds. The merit review in this section will satisfy the merit review requirement of section 103 as well.

Sec. 106. Research Facilities. This section amends the Research Facilities Act by replacing the word "regional" everywhere it appears with "multistate." This section requires the Secretary to ensure that ARS research facilities serve national or multistate needs. The section requires the Secretary to periodically review each operating agricultural research facility constructed in whole or in part with Federal funds and each planned agricultural research facility. The Competitive, Special and Facilities Research

Grant Act is also amended by replacing the word “regional” everywhere it appears with “national or multistate.”

TITLE II—OTHER REFORM OF AGRICULTURAL RESEARCH, EXTENSION AND EDUCATION

Subtitle A—Amendments to National Agricultural Research, Extension, and Teaching Policy Act of 1977

Sec. 201. Advisory Board. This section requires the Secretary to ensure, to the maximum extent practicable, equal representation of public and private sector members on the Advisory Board.

Sec. 202. Grants and Fellowships for Food and Agricultural Sciences Education. This section requires the Secretary to give priority in this grant program to teaching enhancement projects that demonstrate enhanced cooperation among all types of institutions and priority to teaching enhancement projects that focus on innovative, multidisciplinary education programs, materials and curricula. This section also authorizes the Secretary to maintain a national food and agricultural education information system containing information on enrollment, degrees awarded, faculty and employment placement in the food and agricultural sciences.

Sec. 203 Policy Research Centers. This section amends current grant making authority to include grants for studies that concern the effect of trade agreements on farm and agricultural sector; the environment; rural families, households and economies; and consumer, food, and nutrition.

Sec. 204. International Agricultural Research, Extension, and Teaching. This section adds the word “teaching” to the purposes of several grant programs and authorizes competitive grants for collaborative projects between U.S. scientists, land grant scientists, or scientists from other colleges and universities and scientists from international agricultural research centers in other nations, including the international agricultural research centres of the Consultative Group on International Agriculture Research. This section also requires the Secretary to submit a biennial report to the House and Senate Agriculture Committees about efforts to coordinate international agricultural research and better link domestic and international agricultural research.

Sec. 205. General Administrative Costs. Subsection (a) amends subtitle K of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 by inserting section 1461 which sets an indirect cost cap of 25 percent of total Federal funds provided under a grant for competitive research, extension, or education awarded under the National Research Initiative, the Fund for Rural America, or the Initiative for Future Agriculture and Food Systems.

Subsection (b) amends section 1469 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 to allow the Secretary of Agriculture to retain up to 4 percent of amounts appropriated for an agricultural research, extension, or teaching assistance program for the administration of such program, except where the act authorizing such program specifically authorizes the Secretary to withhold a percentage of funds for the administration of that specific program. This subsection would also amend section

1469 to provide for the retention for administrative costs of 4 percent of funds made available under section 25 of the Food Stamp Act of 1977 for community food projects.

Sec. 206. Expansion of Authority to Enter Into Cost-Reimbursable Agreements. Section 206 would amend section 1473A of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 to expand current authority of the Secretary of Agriculture to enter into cost-reimbursable agreements with State cooperative institutions (i.e., land-grant colleges and universities) for the acquisition of goods or services, including personal services, to carry out agricultural research, extension, or teaching activities of mutual interest, by additionally allowing the Secretary to enter into such agreements with any college or university.

Subtitle B—Amendments to Food, Agriculture, Conservation, and Trade Act of 1990

Sec. 211. National Agricultural Weather Information System. Section 211 would rewrite subtitle D of title XVI of the Food, Agriculture, Conservation, and Trade Act of 1990. This section would provide that section 1637 of the Act establish the short title for the subtitle as the “National Agricultural Weather Information System Act of 1997” and would establish the purposes of this subtitle to coordinate national agricultural weather and climate station network, ensure timely and accurate agriculture related weather information is disseminated and aid research and education projects which require agricultural weather and climate data.

This section would provide that section 1638 of the Food, Agriculture, Conservation, and Trade Act of 1990 would authorize the Secretary of Agriculture to establish the National Agricultural Weather Information System (NAWIS). This section would also authorize the Secretary of Agriculture to enter into cooperative projects with, and award grants to other Federal, regional, and State agencies to support development and dissemination of agricultural weather and climate information; to collect weather data through regional and State agricultural weather information systems; coordinate the weather activities of the Department of Agriculture with other Federal agencies and the private sector; make grants regarding State and regional agricultural weather information systems; and to encourage private sector participation in NAWIS activities. This section would also specifically authorize a competitive grants program to support projects to improve the manner in which agricultural weather and climate information is collected, retained, and distributed.

This section would provide that section 1639 of the Food, Agriculture, Conservation, and Trade Act of 1990 require that no more than two-thirds of the funds appropriated for the subtitle shall be used for work with the National Oceanic and Atmospheric Administration. This revised section would also prohibit the Secretary of Agriculture from awarding any grant funds for the construction of facilities and would limit the purchase of equipment with grants funds to no more than the lesser of one-third of the award or \$15,000.

This section would provide that section 1640 of the Food, Agriculture, Conservation, and Trade Act of 1990 authorize to be appro-

priated \$15 million for each of the 1998 through 2002 fiscal years to carry out the purposes of the revised subtitle.

Sec. 212. National Food Genome Strategy. This section would rewrite section 1671 of the Food, Agriculture, Conservation and Trade Act of 1990 to authorize the Secretary to establish a National Food Genome Strategy for agriculturally important plants, animals, and microbes. Subsection (a) of 1671 would establish the purposes of the section. Subsection (b) would require the Secretary of Agriculture develop and carry out a National Food Genome Strategy on the development and dissemination of information regarding the genetics of agriculturally important plants, animals, and microbes. Subsection (c) would authorize the Secretary of Agriculture to enter into contracts, grants, or cooperative agreements with individuals and organizations in accordance with section 1472 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 to carry out the purposes of this section. This subsection would also require that grants made under this subsection be awarded on a competitive basis. Subsection (d) would require the Secretary of Agriculture to issue necessary regulations. This subsection would also authorize the Secretary to consult with the National Academy of Sciences regarding the National Food Genome Strategy. This subsection would also authorize the Secretary to include in contracts, grants, and cooperative agreements an allowance for indirect costs in the same manner such costs are allowed under contracts, grants and cooperative agreements by the National Science Foundation.

Sec. 213. Imported Fire Ant Control, Management, and Eradication. This section creates a three tiered grant program and authorizes the Secretary to establish a National Advisory Board on fire ant control, management, and eradication. Eligible grant recipients include colleges, universities, research institutes, Federal labs, or private entities selected by the Secretary on a competitive basis.

Sec. 214. Agricultural Telecommunications Program. This section contains amendments that authorize the Secretary to award a grant to A*DEC to enable it to administer the Agricultural Telecommunications Program.

Sec. 215. Assistive Technology Program for Farmers with Disabilities. This section changes the AgrAbility authorization to reflect the current distribution of funds. It eliminates the separate spending authority for the national grant program in favor of a combined authorization of \$6 million, with instructions that 15 percent of total program appropriations be designated for nationally coordinated AgrAbility activities.

Subtitle C—Amendments to Other Laws

Sec. 221. 1994 Institutions. This section amends the Equity In Education Land-Grant Status Act of 1994 by adding Little Priest Tribal College of Nebraska to the list of 1994 Institutions and adds a requirement that 1994 Institutions either be accredited or working towards accreditation in order to receive funding under the Act.

Sec. 222. Cooperative Agricultural Extension Work by 1862, 1890, and 1994 Institutions. This section amends the Smith-Lever Act to provide funding and authority for 1994 Institutions for ex-

tension activities which may be carried out through cooperative agreements with land grant colleges in any State.

Sec. 223. Eligibility of Certain Colleges and Universities for Extension Funding. This section amends section 3(d) of the Smith-Lever Act by expanding the list of institutions eligible to receive competitive funding under the Act to include all colleges and universities. It further amends section 3(d) of the Act by making 1890 and 1994 Institutions eligible for non-competitive extension funding, as well as the 1862 Institutions. The Secretary is authorized to enter into memoranda of understanding, cooperative agreements and reimbursable agreements with other Federal agencies to assist in carrying out extension programs. The section also contains a conforming amendment.

Sec. 224. Integration of Research and Extension. This section amends the Smith-Lever and Hatch Acts by requiring that a certain percentage of Smith-Lever (b) and (c) and Hatch Act funds going to a State be used for integrated cooperative extension and research activities. In order to determine the applicable percentage, the Secretary shall determine the percentage of Federal formula funds that a State spent for fiscal year 1997 for integrated research and cooperative extension activities. Then starting in fiscal year 2000, the applicable percentage will be 25 percent or twice the percentage determined to be spent on integrated activities in 1997, whichever is less. The Secretary is given the authority to reduce the minimum percentage required in a case of hardship, infeasibility or other similar circumstance beyond the control of the State.

The States are to inform the Secretary of the manner in which they will meet the applicable percentage requirement. The section also provides that funds used towards meeting the integration requirement may also be used to satisfy the percentage requirements contained in sections 104 and 105 of the Bill. The section contains language exempting any State and local matching funds from the integration requirement.

Sec. 225. Competitive, Special and Facilities Research Grants. This section amends the Competitive, Special, and Facilities Research Grants Act by adding national laboratories to the list of eligible grantees under the NRI. The section amends the time period for special grants from 5 years to 3 years and requires that the grants be for the purpose of conducting research to address agricultural research needs of immediate importance, by themselves or in conjunction with extension or education; or new or emerging areas of agricultural research, by themselves or in conjunction with extension or education. This section retains the prohibition on providing special grants for facilities. Scientific peer review is required for research projects funded under this section and merit review is required for extension or education projects funded by a special grant. Eligible grantees include colleges, universities, other research institutions and organizations, Federal agencies, private organizations or corporations, and individuals.

A partnership requirement is imposed for projects that address immediate needs. For projects that address new or emerging research issues, a partnership is required after three years in order to receive funding for additional years and the partnership must be comprised of at least 2 other entities, in addition to the grantee.

Each grantee must also provide to the Secretary a proposed plan for graduation from Federal funding under this section. Graduation plans and partnership requirements do not apply to non-competitive special grants. Grant recipients are required to file annual reports describing the results of their research, extension or education activities and the merit of those results. To the extent allowable by law, these reports are to be made available to the public. The section also contains a 4 percent set aside for administrative costs. The effective date for the section is October 1, 1998.

Subsection (a)(2) would allow for grant awards under the NRI to a new investigator who is still within 5 years of the individual's initial career track position rather than investigators who have less than 5 years of post-graduate research experience.

Sec. 226. Fund for Rural America. This section provides funding for the Fund through October 1, 2001, including FY 1998 which had not been funded. The percentage of the Fund to be allocated among Rural Development programs is increased to 50 percent and the Research portion is established at 33 percent with the remaining 17 percent to be allocated among either the Research or Rural Development Accounts at the discretion of the Secretary.

Sec. 227. Honey Research. This section contains an amendment to the Honey Research, Promotion, and Consumer Information Improvement Act of 1997 and requires the Honey Board to reserve at least 8 percent of all assessments collected for expenditure on approved research projects to advance the competitiveness of the honey industry.

Sec. 228. Office of Energy Policy and New Uses. This section amends the Department of Agriculture Reorganization Act of 1994 by establishing, within the Office of the Secretary, an Office of Energy Policy and New Uses.

Subtitle D—New Programs

Sec. 231. Biobased Products. The Secretary is directed to coordinate research, economic information, market information and other activities to develop and promote biobased products. The Secretary shall consult with private sector biobased product producers and provide a centralized contact point to provide advice and technical assistance to individuals interested in developing biobased products. The Secretary will make an annual report to Congress on biobased activities.

The Secretary is given the authority to use scientific expertise and facilities to conduct research leading to the further development and market testing of biobased products. This authority is open to CRADA partners, and individuals who have received funding through AARC, BRDC and SBIR.

The Secretary is given the authority to award ARS funds competitively to encourage scientific excellence and creativity. The first three years of this authority direct the Secretary to focus such grants toward the development of biobased products with promising commercial potential. The section provides an authorization of appropriations of \$10 million per year.

Sec. 232. Precision Agriculture. This section authorizes a new competitive grant program for research, education and information

dissemination projects for the development and promotion of precision agriculture.

Sec. 233. Formosan Termite Eradication Program. This section authorizes a new competitive grant program for the purposes of conducting research for the control, management and possible eradication of Formosan termites in the United States. It also provides that the Secretary may enter into cooperative agreements for conducting projects for Formosan termite control and management and data collection.

Sec. 234. Nutrient Composition Data. This section requires the Secretary to update periodically nutrient composition data and to report to Congress the method that will be used to update the data and the timing of the update.

Sec. 235. Consolidated Administrative and Laboratory Facility. This section provides authority for the Secretary to contract for construction of a consolidated APHIS laboratory facility in Ames, Iowa.

Sec. 236. National Swine Research Center. This section authorizes the Secretary, subject to the availability of appropriations and prior to December 31, 1998, to accept as a gift and administer the National Swine Research Center located in Ames, Iowa.

Subtitle E—Studies and Miscellaneous

Sec. 241. Evaluation of Agricultural Research, Extension and Education Program. This section directs the Secretary to conduct a performance evaluation to determine whether federally funded agricultural research, extension, and education programs result in public goods that have national or multistate significance. This section also requires the Secretary to contract with an expert in research assessment and performance to provide to the Secretary practical guidelines for measuring performance of federally funded agricultural research, extension or education programs. This input should be consistent with the Government Performance and Results Act of 1993.

Sec. 242. Study of Federally Funded Agricultural Research, Extension, and Education. This section directs the Secretary to request the National Academy of Sciences to conduct a study of the role and mission of federally funded agricultural research, extension, and education. The study will include an evaluation of the strength of science conducted by the ARS and the relevance of that science to national priorities; and examination of the formulas for agricultural research and extension funding and examination of the competitive grant system. A report of the study is to be submitted to Congress in two stages beginning eighteen months after the commencement of the Study and concluding within 3 years of the commencement.

Sec. 243. Sense of Congress on State Match for 1890 Institutions. This section states that it is the Sense of Congress that states should provide matching funds for Federal formula funds provided to the 1890 Institutions.

TITLE III—INITIATIVE FOR FUTURE AGRICULTURE AND FOOD SYSTEMS

Sec. 301. Initiative for Future Agriculture and Food Systems. This section creates a new mandatory spending account that provides \$780 million over 5 years for research funding. In FY 1998, the amount is \$100 million and in FY 1999–2002, the amount is \$170 million per year.

This competitively awarded research funding must address critical emerging agricultural issues related to future food production, environmental protection, or farm income or be for activities carried out under the Alternative Agricultural Research and Commercialization Act of 1990. Priority mission areas to be addressed with funding in the first year are food genome; food safety, food technology and human nutrition; new and alternative uses and production of agricultural commodities and products; agricultural biotechnology; and natural resource management including precision agriculture. In fiscal years 1999 through 2001, the Secretary, after consultation with the Advisory Board, may change or add to the list of priority mission areas.

Eligible grantees include Federal research agencies, national laboratories, colleges or universities, and private research organizations with established research capacity. The Secretary may award grants to ensure that the faculty of small and mid-sized institutions who have not previously obtained competitive grants from the Secretary receive a portion of the grants.

The Secretary is to give priority to grants that are multi state, multi-institutional, or multi disciplinary and to grants that integrate agricultural research, extension and education. The Secretary is also directed to solicit and consider input from stakeholders as required in section 102 of the bill in formulating the requests for grant proposals. Scientific peer review or merit review are required as stated in section 103 of the Bill.

The section requires that matching funds be provided from a non-Federal source if the grant is for research that is commodity-specific and not of national scope. The Secretary is authorized to establish one or more institutes to carry out all or part of the section.

TITLE IV—EXTENSION OR REPEAL OF CERTAIN AUTHORITIES, TECHNICAL AMENDMENTS

Sec. 401. Extensions of Authorities. This section reauthorizes existing research programs until the year 2002.

Sec. 402. Repeal of Authorities. This section repeals authority for certain agricultural research programs.

Sec. 403. Short Titles for Smith-Lever Act and Hatch Act of 1887. This section amends the Smith-Lever and Hatch Acts to include short titles of each Act.

Sec. 404. Technical Corrections to Research Provisions of Federal Agriculture Improvement and Reform Act of 1996. This section contains technical corrections to the Research title of the 1996 Farm Bill.

TITLE V—AGRICULTURAL PROGRAM SAVINGS

Sec. 501. Nutrition Programs. This section continues to allow the Secretary to pay 50 percent of State administrative costs for food stamps, but limits the amount that the Secretary will pay each State for administering the Food Stamp Program. For FY 1998, each State will be reimbursed an amount not to exceed 110 percent of the amount the Secretary paid the State for administrative expenses in fiscal year 1996, except that amounts the Secretary paid for developing automated data processing and information retrieval systems (i.e., computer systems) and employment and training administrative expenses are not included in the formula. Enhanced funding for States with very low erroneous benefit payments would not be covered by the limit. For FY 1999 and thereafter, each State will be reimbursed in an amount not to exceed 115 percent of the amount the Secretary paid a State in FY 1996: (1) annually adjusted to reflect changes in the Consumer Price Index, and (2) adjusted, as States submit their claims for Federal reimbursement, for changes in the number of food stamp households served in the State. This section also requires the General Accounting Office to submit a study on the effect of this administrative expense reimbursement limitation on the ability of State agencies to administer the food stamp program.

This section requires the Secretary to establish a competitive low-income area grant program to provide funding to initiate or expand school breakfast and summer food service programs in low-income areas. The grant program will be funded at \$5,000,000 annually and the Secretary shall use the funds to the extent that a sufficient number of schools and service institutions meet eligibility guidelines established by the Secretary, but the Secretary is not required to use all of the money provided. The grant program gives priority to school food authorities (typically school districts) serving primarily low-income children which do not already operate school breakfast or summer food service programs.

This section requires the Secretary to reimburse child care centers for serving a fourth meal or supplement to children who are in centers longer than eight hours per day in order to accommodate working parents. This section also requires the Secretary to reimburse service institutions running summer food service programs at camps for low-income children or that serve primarily migrant children for up to four meals or supplements during each day of operation. This requirement takes effect on September 1, 1998.

The section provides \$185,000 for each of fiscal years 1998 through 2002 for the Information Clearinghouse. The clearinghouse provides information to groups that assist low-income individuals in becoming self-reliant and less dependent on Federal, State or local governmental agencies for food and other assistance.

Sec. 502. Information Technology Funding. CCC funding that can be used to purchase automated data processing equipment, telecommunications equipment, and other information technology was capped in the FAIR Act. In this section, as of the 1998 fiscal year, the funding cap is further lowered to achieve a savings of \$82 million through 2002.

Sec. 503. Haying and Grazing on Conservation Reserve Land. This section authorizes the Secretary, as of the 1998 fiscal year, to allow haying and grazing on agricultural lands enrolled in the CRP if—

not more than $\frac{1}{3}$ of the land is harvested or grazed in any calendar year;

that portion of the land is not hayed or grazed more than once in a 3-year period;

the owner or operator of the land agrees to a reduction in CRP rental payments that is commensurate with the value of the cover crop that is harvested or grazed;

in the case of grazing of CRP land, (1) the grazing is incidental to the gleaning of crop residues, and (2) the owner or operator of the land agrees to a reduction in CRP rental payments that is commensurate with the value of the crop residue that is subject to the incidental grazing.

VII. CHANGES IN EXISTING LAW

In compliance with rule XXVI, paragraph 12 of the Standing Rules of the Senate, the following provides a print of the statute or the part or section thereof to be amended or replaced (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

FEDERAL AGRICULTURE IMPROVEMENT AND REFORM ACT OF 1996

TITLE VII—RURAL DEVELOPMENT . . .

* * * * *

Subtitle D—Miscellaneous Rural Development Provisions . . .

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SEC. 793. FUND FOR RURAL AMERICA.

(a) IN GENERAL.—There is established in the Treasury of the United States an account to be known as the Fund for Rural America (referred to in this section as the “Account”) to provide funds for activities described in subsection (c).

(b) FUNDING.—

(1) IN GENERAL.—On **January 1, 1997, October 1, 1998, and October 1, 1999** *“October 1, 1997, and each October 1 thereafter through October 1, 2001”*, . . .

[(3) PURPOSES.—Subject to subsection (d), of the amounts transferred to the Account for a fiscal year, the Secretary shall make available—

[(A) for activities described in subsection (c)(1), not less than $\frac{1}{3}$ and not more than $\frac{2}{3}$ of the funds in the Account; and

[(B) for activities described in subsection (c)(2), all funds in the Account not made available by the Secretary for activities described in subsection (c)(1)]

“(3) *PURPOSES.*—Subject to subsection (d), of the amounts transferred to the Account for a fiscal year, the Secretary shall make available—

“(A) for activities described in subsection (c)(1), not less than 50 percent, and not more than 67 percent, of the funds in the Account; and

“(B) for activities described in subsection (c)(2), all funds in the Account not made available under subparagraph (A).” . . .

SEC. 819. SUPPLEMENTAL AND ALTERNATIVE CROP RESEARCH . . .

(b) Elimination of Pilot Nature of Program. . .

(5) **[in paragraph (3)]** “subsection (c)(3)”, by striking “and pilot”. . .

SEC. 873. GRANTS TO UPGRADE 1890 LAND-GRANT COLLEGE EXTENSION FACILITIES.—

Section 1416 of the National Agricultural Research, Extension, and Teaching Policy Act Amendments of **[1981]** “1985” is repealed. . . .

SEC. 2412. AUTHORIZATION OF APPROPRIATIONS.—

There are authorized to be appropriated such sums as may be necessary for each of the fiscal years 1991 through **[1997]** “2002”, to carry out this chapter.

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Department of Agriculture Reorganization Act of 1994 . . .

“*SEC. 220. Office of Energy Policy and New Uses.*

“*An Office of Energy Policy and New Uses of the Department shall be established in the Office of the Secretary.*”

* * * * *

Renewable Resources Extension Act of 1978 (16 U.S.C. 1675) . . .

Section 6 Authorization of Appropriations. . . .

There are authorized to be appropriated to implement this subchapter \$15,000,000 for **[the fiscal year ending September 30, 1988, and \$15,000,000 for each of the next twelve fiscal years.]** “each of fiscal years 1987 through 2002.” . . .

* * * * *

Food Security Act of 1985 . . .

SEC. 1232. DUTIES OF OWNERS AND OPERATORS . . .

(b) **TERMS OF CONTRACT . . .**

[(7) not to conduct any harvesting or grazing, nor otherwise make commercial use of the forage, on land that is subject to contract, nor adopt any similar practice specified in the contract by the Secretary as a practice that would tend to defeat the purposes of the contract, except that the Secretary may permit harvesting or grazing or other commercial use of the forage on the land that is subject to the contract in response to a drought or other similar emergency, and the Secretary may permit limited grazing on such land where such grazing

is incidental to the gleaning of crop residues on the fields in which such land is located and occurs during the 7 month period in which grazing of conserving use acreage is allowed in the State under the Agricultural Act of 1949 (7 U.S.C. 1421 et seq.) or after the producer harvests the grain crop of the surrounding field for the reduction rental payment commensurate with the limited economic value of such incidental grazing;】

“(7) not to conduct any harvesting or grazing, nor otherwise make commercial use of the forage, on land that is subject to the contract, nor adopt any similar practice specified in the contract by the Secretary as a practice that would tend to defeat the purposes of the contract, except that—

“(A) on application by an owner or operator who has entered into the contract with the Secretary, the Secretary shall permit harvesting and grazing on land that the Secretary determines has a sufficiently established cover to permit harvesting or grazing without undue harm to the purposes of the contract if—

“(i) not more than $\frac{1}{3}$ of the land under the contract is harvested or grazed in any calendar year;

“(ii) no land under the contract will be harvested or grazed more than once in a 3-year period;

“(iii) the owner or operator agrees to a payment reduction under this subchapter in an amount that the Secretary determines is commensurate with the value of the cover crop that is harvested or grazed; and

“(iv) the owner or operator agrees to such other terms and conditions as the Secretary may establish to ensure that the harvesting or grazing is consistent with the purposes of the program established under this subchapter; and

“(B) the Secretary may permit grazing on land under the contract if—

“(i) the grazing is incidental to the gleaning of crop residues;

“(ii) the owner or operator agrees to a payment reduction in annual rental payments that would otherwise be payable under this subchapter in an amount that the Secretary determines is commensurate with the economic value of the forage that is subject to the incidental grazing; and

“(iii) the owner or operator agrees to such other terms and conditions as the secretary may establish to ensure that he grazing is consistent with the purposes of the program established under this subchapter;” . . .

* * * * *

Child Nutrition Act of 1966

Section 4 . . .

“(f) *LOW-INCOME AREA GRANT PROGRAM.*—

“(1) *DEFINITIONS.*—In this subsection:

“(A) *ELIGIBLE SCHOOL.*—The term ‘eligible school’ means a school—

“(i) attended by children, a significant percentage of whom are members of low-income families, as determined by the Secretary; and

“(ii)(I) as used with respect to a school breakfast program, that agrees to operate the school breakfast program established or expanded with the assistance provided under this subsection for a period of not less than 3 years; and

“(II) as used with respect to a summer food service program for children, that agrees to operate the summer food service program for children established or expanded with the assistance provided under this subsection for a period of not less than 3 years.

“(B) *SERVICE INSTITUTION*.—The term ‘service institution’ means an institution or organization described in paragraph (1)(B) or (7) of section 13(a) of the National School Lunch Act (42 U.S.C. 1761(a)).

“(C) *SUMMER FOOD SERVICE PROGRAM FOR CHILDREN*.—The term ‘summer food service program for children’ means a program authorized by section 13 of the National School Lunch Act (42 U.S.C. 1761).

“(2) *ESTABLISHMENT*.—The Secretary shall establish a program under this subsection to be known as the ‘low-income area Grant Program’ (referred to in this subsection as the ‘Program’) to assist eligible schools and service institutions through grants to initiate or expand programs under the school breakfast program and the summer food service program for children.

“(3) *PAYMENTS*.—

“(A) *APPROPRIATION*.—Out of any moneys in the Treasury not otherwise appropriated, the Secretary of the Treasury shall provide to the Secretary \$5,000,000 for fiscal year 1998 and each fiscal year thereafter.

“(B) *ENTITLEMENT TO FUNDS*.—The Secretary shall be entitled to receive the funds made available under subparagraph (A) and shall accept the funds.

“(C) *USE OF FUNDS*.—The Secretary shall use the funds made available under subparagraph (A) to make payments under the Program—

“(i) in the case of the school breakfast program, to school food authorities for eligible schools; and

“(ii) in the case of the summer food service program for children, to service institutions.

“(D) *INSUFFICIENT NUMBER OF APPLICANTS*.—The Secretary may expend less than the amount described in subparagraph (A) for a fiscal year to the extent that there is an insufficient number of suitable applicants to initiate or expand programs under this subsection for the fiscal year.

“(4) *PRIORITY*.—The Secretary shall make payments under the Program on a competitive basis and in the following order of priority (subject to the other provisions of this subsection) to:

“(A) School food authorities for eligible schools to assist the schools with nonrecurring expenses incurred in—

“(i) initiating a school breakfast program under this section; or

“(ii) expanding a school breakfast program.

“(B) Service institutions to assist the institutions with nonrecurring expenses incurred in—

“(i) initiating a summer food service program for children; or

“(ii) expanding a summer food service program for children.

“(5) PAYMENTS ADDITIONAL.—Payments under the Program shall be in addition to payments under subsection (b) of this section and section 13 of the National School Lunch Act (42 U.S.C. 1761).

“(6) PREFERENCES.—Consistent with paragraph (4), in making payments under the Program for any fiscal year to initiate or expand school breakfast programs or summer food service programs for children, the Secretary shall provide a preference to a school food authority for an eligible school or service institution that—

“(A) in the case of a summer food service program for children, is a public or private nonprofit school food authority;

“(B) has significant public or private resources that will be used to carry out the initiation or expansion of the programs during the year;

“(C) serves an unmet need among low-income children, as determined by the Secretary; or

“(D) is not operating a school breakfast program or summer food service program for children, as appropriate.

“(7) RECOVERY AND REALLOCATION.—The Secretary shall act in a timely manner to recover and reallocate to other school food authorities for eligible schools or service institutions any amounts under the Program that are not expended within a reasonable period (as determined by the Secretary).

“(8) MAINTENANCE OF EFFORT.—Expenditures of funds from State, local, and private sources for the maintenance of the school breakfast program and the summer food service program for children shall not be diminished as a result of payments received under the Program.” . . .

* * * * *

National School Lunch Act

Section 13(b)(2)

[(2) Any service] “MEALS AND SUPPLEMENTS.—

“(A) IN GENERAL.—Any Service” institution may only serve lunch and either breakfast or a meal . . . may serve up to [3 meals, or 2 meals and 1 supplement] “4 meals”, during each day of operation, if [A] “(i)” and the service institution . . . [B] “(ii)” the service . . .

“(B) CAMPS AND MIGRANT PROGRAMS.—A camp or migrant program may serve a breakfast, a lunch, a supper, and meal supplements.”

Section 17

(f) State disbursement of institutions . . .

(2) **[(B)** No reimbursement may be made to any institution under this paragraph, or to family or group day care home sponsoring organizations under paragraph (3) of this subsection, for more than two meals and one supplemental per day per child, or in the case of an institution (but not in the case of a family or group day care home sponsoring organization), 2 meals and 1 supplemental per day per child, for children that are maintained in a child care setting for eight or more hours per day.]

“(B) NUMBER OF MEALS AND SUPPLEMENTS.—

“(i) IN GENERAL.—Except as provided in clause (ii), no reimbursement may be made to any institution under this paragraph, or to a family or group day care home sponsoring organization under paragraph (3), for more than 2 meals and 1 supplement per day per child.

“(ii) CHILD CARE.—A reimbursement may be made to an institution under this paragraph (but not a family or group day care home sponsoring organization) for 2 meals and 2 supplements, or 3 meals and 1 supplement, per day per child for children that are maintained in a child care setting for 8 or more hours per day.” . . .

Section 26 (42 U.S.C. 1769g(d))

1769g. Information Clearinghouse . . .

(d) FUNDING—

Out of the moneys in the Treasury not otherwise appropriated, the Secretary of the Treasury shall pay to the Secretary to provide to the organization selected under this section, to establish and maintain the information clearinghouse, \$200,000 for each of the fiscal years 1995 and 1996, **[\$150,000 for fiscal year 1997, and \$100,000 for fiscal year 1998]** *“150,000 for fiscal year 1997, and \$185,000 for each of fiscal years 1998 through 2002”*. . . .

* * * * *

**Commodity Credit Corporation Charter Act (15 U.S.C.
714b(g))**

714b General powers of Corporation

The Corporation—

(g) May enter into and carry out such contracts or agreements as are necessary in the contracts or agreements as . . . and not more than **[\$275,000,000]** *“193,000,000”* in the 6-fiscal year period . . .

* * * * *

Critical Agricultural Materials Act (7 U.S.C. 178n(a))

SEC. 16 Administration and Funding

(a) Authorization of appropriations to the Secretary of Agriculture

There are authorized to be appropriated to the Secretary of Agriculture such sums as are necessary to carry out this subchapter in each of the fiscal year 1991 through [1997] “2002”.

* * * * *

Competitive, Special and Facilities Research Grant Act . . .

SEC. 2. COMPETITIVE, SPECIAL, AND FACILITIES RESEARCH GRANTS.

SEC. 2 . . .

(b) COMPETITIVE GRANTS.—

(1) The Secretary of Agriculture is authorized to make competitive grants, for periods not to exceed five years, to State agricultural experiment stations, all colleges and universities, other research institutions and organizations, Federal agencies, “national laboratories,” . . .

(2) HIGH PRIORITY RESEARCH.—For purposes of this subsection, the term “high priority research” means basic and applied research that focuses on both national and [regional] “multistate” . . .

(3) TYPES OF GRANTS.—

(E) Grants may be awarded to single investigators or co-investigators who are beginning their research careers and do not have an extensive research publication record. To be eligible for a grant under this subparagraph, [an individual shall have less than 5 years of post-graduate research experience] “an individual shall be within 5 years of the individual’s initial career track position”. . .

(10) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this subsection \$150,000,000 for fiscal year 1991, \$275,000,000 for fiscal year 1992, \$350,000,000 for fiscal year 1993, \$400,000,000 for fiscal year 1994, and \$500,000,000 for each fiscal years 1995 through [1997] “2002” . . .

[(c) SPECIAL GRANTS.—(1) The Secretary of Agriculture may make grants, for periods not to exceed 5 years—

[(A) to State agricultural experiment stations, all colleges and universities, other research institutions and organizations, Federal agencies, private organizations or corporations, and individuals for the purpose of conducting research to facilitate or expand promising breakthroughs in areas of the food and agricultural sciences of importance to the United States; and

[(B) to State agricultural experiment stations, land grant colleges and universities, research foundations established by land grant colleges and universities, colleges and universities receiving funds under the Act of October 10, 1962 (16 U.S.C. 582a et seq.), and accredited schools or colleges of veterinary medicine for the purpose of facilitating or expanding ongoing State Federal food and agricultural research programs that—

[(i) promote excellence in research on a regional and national level;

[(ii) promote the development of regional research centers;

[(iii) promote the research partnership between the Department of Agriculture, colleges and universities, research

foundations, and State agricultural experiment stations for regional research efforts; and

[(iv) facilitate coordination and cooperation of research among States through regional research grants.

[(2) LIMITATIONS.—The Secretary may not make a grant under this subsection—

[(A) for any purpose for which a grant may be made under subsection (d); or

[(B) for the planning, repair, rehabilitation, acquisition, or construction of a building or facility.

[(3) MATCHING FUNDS.—Grants made under this subsection shall be made without regard to matching funds.

[(4) SET ASIDES.—Of amounts appropriated for a fiscal year to carry out this subsection—

[(A) ninety percent of such amounts shall be used for grants for regional research projects; and

[(B) four percent of such amounts may be retained by the Secretary to pay administrative costs incurred by the Secretary to carry out this subsection.]

“(c) SPECIAL GRANTS.—

“(1) IN GENERAL.—*The Secretary of Agriculture may make grants, for periods not to exceed 3 years, to colleges, universities, other research institutions and organizations, Federal agencies, private organizations or corporations, and individuals for the purpose of conducting research to address—*

“(A) agricultural research needs of immediate importance, by themselves or in conjunction with extension or education; or

“(B) new or emerging areas of agricultural research, by themselves or in conjunction with extension or education.

“(2) LIMITATIONS.—*The Secretary may not make a grant under this subsection—*

“(A) for any purpose for which a grant may be made under subsection (d); or

“(B) for the planning, repair, rehabilitation, acquisition, or construction of a building or facility.

“(3) REVIEW REQUIREMENTS.—

“(A) RESEARCH ACTIVITIES.—The Secretary shall make a grant under this subsection for a research activity only if—

“(i) the activity has undergone scientific peer review arranged by the grantee in accordance with regulations promulgated by the Secretary; and

“(ii) except in the case of a grant awarded competitively under this subsection, the grantee provides to the Secretary a proposed plan for graduation from non-competitive Federal funding for grants under this subsection.

“(B) EXTENSION AND EDUCATION ACTIVITIES.—The Secretary shall make a grant under this subsection for an extension or education activity only if—

“(i) the activity has undergone merit review arranged by the grantee in accordance with regulations promulgated by the Secretary; and

“(ii) except in the case of a grant awarded competitively under this subsection, the grantee provides to the Secretary a proposed plan for graduation from Federal funding under this section.

“(4) PARTNERSHIPS.—

“(A) IMMEDIATE NEEDS.—Except in the case of a grant awarded competitively under this subsection, to receive a grant under paragraph (1)(A), a recipient of a grant shall enter into a partnership to carry out the grant with another entity referred to in paragraph (1).

“(B) NEW AND EMERGING AREAS.—Except in the case of a grant awarded competitively under this subsection, after a recipient has received a grant under paragraph (1)(B) for 3 consecutive years, to receive such a grant for an additional year, the recipient shall enter into a partnership to carry out the grant with 2 or more entities referred to in paragraph (1).

“(5) REPORTS.—

“(A) IN GENERAL.—A recipient of a grant under this subsection shall—

“(i) prepare on an annual basis a report describing the results of the research, extension, or education activity and the merit of the results; and

“(ii) submit the report to the Secretary.

“(B) PUBLIC AVAILABILITY.—

“(i) IN GENERAL.—Except as provided in clause (ii), on request, the Secretary shall make the report available to the public.

“(ii) EXCEPTIONS.—Clause (i) shall not apply to the extent that making the report, or a part of the report, available to the public is not authorized or permitted by section 552 of title 5, United States Code, or section 1905 of title 18, United States Code.

“(6) SET ASIDE FOR ADMINISTRATIVE COSTS.—Of the amounts made available for a fiscal year to carry out this subsection, not more than 4 percent of the amounts may be retained by the Secretary to pay administrative costs incurred by the Secretary to carry out this subsection.” . . .

RESEARCH FACILITIES ACT . . .

SEC. 3 . . .

(c) CRITERIA FOR APPROVAL.— . . .

(C) NATIONAL RESEARCH PRIORITIES.— . . .

(ii) [regional needs] “national or multistate needs”. . . .

“(e) NATIONAL OR MULTISTATE NEEDS SERVED BY ARS FACILITIES.—*The Secretary shall ensure that each research activity conducted by a facility of the Agricultural Research Service serves a national or multistate need.” . . .*

SEC. 4 . . .

(d) 10-YEAR STRATEGIC PLAN.—*Not later than 2 years after the task force is established, the task force shall prepare and submit to the Secretary and the congressional agriculture committees a 10-year strategic plan, reflecting both national and [regional] “multistate” perspectives . . .*

“(g) COMPREHENSIVE RESEARCH CAPACITY.—After submission of the 10-year strategic plan required under subsection (d), the Secretary shall continue to review periodically each operating agricultural research facility constructed in whole or in part with Federal funds, and each planned agricultural research facility proposed to be constructed in whole or in part with Federal funds, pursuant to criteria established by the Secretary, to ensure that a comprehensive research capacity is maintained.” . . .

SEC. 6 . . . (a) IN GENERAL.—Subject to subsection (b), there are authorized to be appropriated such sums as are necessary [for fiscal years 1996 and 1997] *“each of fiscal years 1996 through 2002”* for the study . . .

EQUITY IN EDUCATIONAL LAND-GRANT STATUS ACT OF 1994 . . .

SEC. 532

(29) College of the Menominee Nation.

“(30) Little Priest Tribal College.”

SEC. 533

(a) IN GENERAL.—. . .

“(3) ACCREDITATION.—To receive funding under sections 534 and 535, a 1994 Institution shall certify to the Secretary that the Institution is—

“(A) accredited by a nationally recognized accrediting agency or association determined by the Secretary, in consultation with the Secretary of Education, to be a reliable authority as to the quality of training offered; or

“(B) as determined by the agency or association, making progress toward the accreditation.”

(b) AUTHORIZATION OF APPROPRIATION.—There are authorized to be appropriated \$4,600,000 for each of fiscal years 1996 through [2000] *“2002”*. . . .

NATIONAL AGRICULTURAL RESEARCH, EXTENSION, AND TEACHING POLICY ACT AMENDMENTS OF 1981

SEC. 1432.

(b) . . .

(5) There is authorized to be appropriated to the Secretary to carry out this subsection, for each of the fiscal years 1991 through [1997] *“2002”*. . . .

NATIONAL AQUACULTURE ACT OF 1980 . . .

SEC. 10. For purposes of carrying out the provisions of this Act, there are authorized to be appropriated—

(1) to the Department of Agriculture, \$1,000,000 for each of the [fiscal years 1991, 1992, and 1993] *“fiscal years 1991 through 2002”*. . . .

SMITH-LEVER ACT . . .

SEC. 3. . . .

SEC. 3. (a) there are hereby authorized to be appropriated for the purposes of this Act such sums as Congress may from time to time determine to be necessary.

(b)(1) Out of such sums, each State and the [Federal Extension Service] “Secretary of Agriculture” . . .

(3) . . . Such sums shall be distributed on the basis of a competitive application process to be developed and implemented by the Secretary and paid by the Secretary to [State institutions established in accordance with the provisions of the Act of July 2, 1862 (12 Stat. 503, chapter 103; 7 U.S.C. 301 et seq.) (commonly known as the First Morrill Act) (other than 1994 Institutions) and administered by such institutions through cooperative agreements with 1994 Institutions in the States of the 1994 Institutions in accordance with regulations that the Secretary shall adopt.] “1994 Institutions (in accordance with regulations that the Secretary may promulgate) and may be administered by the Institutions through cooperative agreements with colleges and universities eligible to receive funds under the Act of July 2, 1862 (12 Stat. 503, chapter 130; 7 U.S.C. 301 et seq.), or the Act of August 30, 1890 (26 Stat. 419, chapter 841; 7 U.S.C. 321 et seq.), including Tuskegee University, located in any state.”

(c) . . .

1. Four per centum of the sum so appropriated for each fiscal year shall be allotted to the [Federal Extension Service] “Secretary of Agriculture” . . .

[(d) The Federal Extension Service shall receive such amounts as Congress shall determine for administration, technical, and other services and for coordinating the extension work of the Department and the several States, Territories, and possessions. A college or university eligible to receive funds under the Act of August 30, 1890 (7 U.S.C. 321 et seq.), including Tuskegee University, may apply for and receive directly from the Secretary of Agriculture—

[(1) amounts made available under this subsection after September 30, 1995, to carry out programs or initiatives for which no funds were made available under this subsection for fiscal year 1995, or any previous fiscal year, as determined by the Secretary; and

[(2) amounts made available after September 30, 1995, to carry out programs or initiatives funded under this subsection prior to that date that are in excess of the highest amount made available for the programs or initiatives under this subsection for fiscal year 1995, or any previous fiscal year, as determined by the Secretary.]

“(d) FUNDING OF EXTENSION ACTIVITIES.—

“(1) IN GENERAL.—The Secretary shall receive such amounts as Congress shall determine for administrative, technical, and other services and for coordinating the extension work of the Department and the several States, territories, and possessions of the United States.

“(2) Eligibility of certain colleges and universities for extension funding.—

“(A) COMPETITIVE AWARDS.—Colleges and universities (as defined in section 1404 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7

U.S.C. 3103)), including a foundation established by the colleges or universities, shall be eligible for extension funding awarded under paragraph (1) on a competitive basis.

“(B) NONCOMPETITIVE AWARDS.—

“(i) IN GENERAL.—An entity described in clause (ii) shall be eligible for extension funding awarded under paragraph (1) on a noncompetitive basis.

“(ii) APPLICABILITY.—Clause (i) shall apply to—

“(I) a college or university eligible to receive funds under the Act of July 2, 1862 (12 Stat. 503, chapter 130; 7 U.S.C. 301 et seq.);

“(II) a college or university eligible to receive funds under the Act of August 30, 1890 (26 Stat. 419, chapter 841; 7 U.S.C. 321 et seq.), including Tuskegee University;

“(III) a 1994 Institution (as defined in section 532 of the Equity in Educational Land-Grant Status Act of 1994 (Public Law 103-382; 7 U.S.C. 301 note)); and

“(IV) a foundation established by a college, university, or Institution described in this clause.

“(3) MEMORANDA OF UNDERSTANDING, COOPERATIVE AGREEMENTS, AND REIMBURSABLE AGREEMENTS.—To maximize the use of Federal resources, the Secretary of Agriculture shall, to the maximum extent practicable, enter into memoranda of understanding, cooperative agreements, or reimbursable agreements with other Federal agencies under which the agencies provide funds, facilities, and other resources of the agencies to the Department of Agriculture to assist the Department in carrying out extension work.” . . .

(g)(1) The Secretary of Agriculture may conduct educational, instructional, demonstration, and publication distribution programs [through the Federal Extension Service] . . .

“(h) MULTISTATE COOPERATIVE EXTENSION ACTIVITIES.—

“(1) IN GENERAL.—Not less than the applicable percentage specified under paragraph (2) of the amounts that are made available to carry out subsections (b) and (c) during a fiscal year shall be allotted to States for cooperative extension activities in which 2 or more States cooperate to solve problems that concern more than 1 State (referred to in this subsection as ‘multistate activities’).

“(2) APPLICABLE PERCENTAGES.—

“(A) CURRENT EXPENDITURES ON MULTISTATE ACTIVITIES.—The Secretary of Agriculture shall determine the percentage of Federal formula funds described in paragraph (1) that each State expended for fiscal year 1997 for multistate activities.

“(B) PLANNED EXPENDITURES ON MULTISTATE ACTIVITIES.—For fiscal year 2000 and each subsequent fiscal year, a State shall expend for multistate activities a percentage of the Federal formula funds described in paragraph (1) for a fiscal year that is at least equal to the lesser of—

“(i) 25 percent; or

“(ii) twice the percentage for the State determined under subparagraph (A).”

“(C) REDUCTION BY SECRETARY.—The Secretary may reduce the minimum percentage required to be allotted for multistate activities under subparagraph (B) in a case of hardship, infeasibility or other similar circumstance beyond the control of the State, as determined by the Secretary.”

“(D) PLAN OF WORK.—The State shall include in the plan of work of the State a description of the manner in which the State will meet the requirements of this paragraph.”

“(3) APPLICABILITY.—This subsection does not apply to funds provided—

“(A) by a State or local government pursuant to a matching requirement;

“(B) to a 1994 Institution (as defined in section 532 of the Equity in Educational Land-Grant Status Act of 1994 (Public Law 103–382; 7 U.S.C. 301 note)); or

“(C) to the Commonwealth of Puerto Rico, the Virgin Islands, or Guam.”

“(i) MERIT REVIEW.—

“(1) IN GENERAL.—Beginning on October 1, 1998, extension activity carried out under subsection (h) shall be subject to merit review.”

“(2) OTHER REQUIREMENTS.—An extension activity that is merit reviewed under paragraph (1) shall be considered to have been reviewed under section 103(e) of the Agricultural Research, Extension, and Education Reform Act of 1997.” . . .

SEC. 6

[SEC. 6. [7 U.S.C. 346] If the Secretary of Agriculture finds that a State is not entitled to receive its share of the annual appropriation, the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in the Treasury until the expiration of the Congress next succeeding a session of the legislature of the State from which funds have been withheld in order that the State may, if it should so desire, appeal to Congress from the determination of the Secretary of Agriculture. If the next Congress shall not direct such sum to be paid, it shall be covered into the Treasury.] . . .

“SEC. 11. SHORT TITLE.

“This act may be cited as the ‘Smith-Lever Act’.”

HATCH ACT OF 1887 . . .

SEC. 3. . . .

(c) Any sums made available by the Congress in addition to those provided for in subsection (b) hereof for State agricultural experiment station work shall be distributed as follows:

[3. Not more than 25 per centum shall be allotted to the States for cooperative research in which two or more State agricultural experiment stations are cooperating to solve problems that concern the agriculture of more than one State. The funds available for such purposes, together with funds available pursuant to sub-

section (b) hereof for like purpose shall be designated as the “Regional research fund, State agricultural experiment stations”.]

“(3) *Not less than 25 percent shall be allotted to the States for cooperative research employing multidisciplinary approaches in which a State agricultural experiment station, working with another State agricultural experiment station, the Agricultural Research Service, a college, or a university, cooperates to solve problems that concern more than 1 State. The funds available under this paragraph, together with the funds available under subsection (b) for a similar purpose, shall be designated as the ‘Multistate Research Fund, State Agricultural Experiment Stations’.*

“(4) *Research carried out under paragraph (3) shall be subject to scientific peer review. A project review under this paragraph shall be considered to satisfy the merit review requirements of section 103(e) of the Agricultural Research, Extension, and Education Reform Act of 1997.*”

SEC. 4 . . .

(d) Of any amount in excess of \$90,000 available under this Act for allotment to any State, exclusive of the [regional research fund, State agricultural experiment stations,] “Multistate Research Fund, State Agricultural Experiment Stations” . . .

“(h) INTEGRATION OF RESEARCH AND EXTENSION.—

“(1) IN GENERAL.—*Not less than the applicable percentage specified under paragraph (2) of the Federal formula funds that are made available to carry out this Act and subsections (b) and (c) of section 3 of the Smith-Lever Act (7 U.S.C. 343), to colleges and universities eligible to receive funds under the Act of July 2, 1862 (12 Stat. 503, chapter 130; 7 U.S.C. 301 et seq.), during a fiscal year shall be allotted to activities that integrate cooperative research and extension (referred to in this subsection as ‘integrated activities’).*

“(2) APPLICABLE PERCENTAGES.—

“(A) CURRENT EXPENDITURES ON INTEGRATED ACTIVITIES.—*The Secretary of Agriculture shall determine the percentage of the Federal formula funds described in paragraph (1) that each State expended for fiscal year 1997 for integrated activities.*

“(B) PLANNED EXPENDITURES ON INTEGRATED ACTIVITIES.—*For fiscal year 2000 and each subsequent fiscal year, a State shall expend for integrated activities a percentage of the Federal formula funds described in paragraph (1) for a fiscal year that is at least equal to the lesser of—*

“(i) 25 percent; or

“(ii) twice the percentage for the State determined under subparagraph (A).

“(C) REDUCTION BY SECRETARY.—*The Secretary may reduce the minimum percentage required to be allotted for integrated activities under subparagraph (B) in a case of hardship, infeasibility, or other similar circumstance beyond the control of the State, as determined by the Secretary.*

“(D) COMPLIANCE.—*The State shall provide to the Secretary a description of the manner in which the State will meet the requirements of this paragraph.*

“(3) *APPLICABILITY.*—This subsection does not apply to funds provided—

“(A) by a State or local government pursuant to a matching requirement;

“(B) to a 1994 Institution (as defined in section 532 of the Equity in Educational Land-Grant Status Act of 1994 (Public Law 103–382; 7 U.S.C. 301 note)); or

“(C) to the Commonwealth of Puerto Rico, the Virgin Islands, or Guam.

“(4) *Other requirements.*—Funds that are used in accordance with paragraph (2)(B) may also be used to satisfy the requirements of subsection (c)(3) and the requirements of section 3(h) of the Smith-Lever Act (7 U.S.C. 343(h)).” . . .

SEC. 7. . . .

Whenever it shall appear to the Secretary of Agriculture from the annual statement of receipts and expenditures of funds by any State agricultural experiment station that any portion of the preceding annual appropriation allotted to that station under this Act remains unexpended, such amount shall be deducted from the next succeeding annual allotment to the State concerned.

【If the Secretary of Agriculture shall withhold from any State any portion of the appropriations available for allotment, the facts and reasons therefor shall be reported to the President and the amount involved shall be kept separate in the Treasury until the close of the next Congress. If the next Congress shall not direct such sum to be paid, it shall be carried to surplus】. . . .

SEC. 9

Sec. 9. The Congress may at any time, amend, suspend, or repeal any or all of the provisions of this Act.

“SEC. 10 *SHORT TITLE*”

“This Act may be cited as the ‘Hatch Act of 1887.’”

THE FOOD, AGRICULTURE, CONSERVATION, AND TRADE ACT OF 1990

SEC. 1629. NATIONAL TRAINING PROGRAM.

(g) *INFORMATION AVAILABILITY.*—The Cooperative Extension Service within each State shall transfer information developed under this subtitle, subtitle G of title XIV, 【section 1650】, . . .

SEC. 1635. DEFINITIONS AND AUTHORIZATION OF APPROPRIATIONS.

(b) *AUTHORIZATION OF APPROPRIATIONS.*—There are authorized to be appropriated such funds as may be necessary to carry out this subtitle for each of the fiscal years 1991 through 【1997】 “2002”. . . .

【Subtitle D—National Agricultural Weather Information System

【SEC. 1637. SHORT TITLE AND PURPOSES.

【(a) *SHORT TITLE.*—This subtitle may be cited as the “National Agricultural Weather Information System Act of 1990”.

【SEC. 1637

【(b) *PURPOSES.*—The purposes of this subtitle are—

【(1) to provide a nationally coordinated agricultural weather information system, based on the participation of universities,

State programs, Federal agencies, and the private weather consulting sector, and aimed at meeting the weather and climate information needs of agricultural producers;

[(2) to facilitate the collection, organization, and dissemination of advisory weather and climate information relevant to agricultural producers, through the participation of the private sector and otherwise;

[(3) to provide for research and education on agricultural weather and climate information, aimed at improving the quality and quantity of weather and climate information available to agricultural producers, including research on short-term forecasts of thunderstorms and on extended weather forecasting techniques and models;

[(4) to encourage, where feasible, greater private sector participation in providing agricultural weather and climate information, to encourage private sector participation in educating and training farmers and others in the proper utilization of agricultural weather and climate information, and to strengthen their ability to provide site-specific weather forecasting for farmers and the agricultural sector in general; and

[(5) to ensure that the weather and climate data bases needed by the agricultural sector are of the highest scientific accuracy and thoroughly documented, and that such data bases are easily accessible for remote computer access.

[SEC. 1638

[SEC. 1638. AGRICULTURAL WEATHER OFFICE.

[(a) ESTABLISHMENT OF THE OFFICE AND ADMINISTRATION OF THE SYSTEM.—

[(1) ESTABLISHMENT REQUIRED.—The Secretary of Agriculture shall establish in the Department of Agriculture an Agricultural Weather Office to plan and administer the National Agricultural Weather Information System. The system shall be comprised of the office established under this section and the activities of the State agricultural weather information systems described in section 1640.

[(2) DIRECTOR.—The Secretary shall appoint a Director to manage the activities of the Agricultural Weather Office and to advise the Secretary on scientific and programmatic coordination for climate, weather, and remote sensing.

[(b) AUTHORITY.—The Secretary, acting through the Office, may undertake the following activities to carry out this subtitle:

[(1) Enter into cooperative projects with the National Weather Service to—

[(A) support operational weather forecasting and observation useful in agriculture;

[(B) sponsor joint workshops to train agriculturalists about the optimum utilization of agricultural weather and climate data;

[(C) jointly develop improved computer models and computing capacity; and

[(D) enhance the quality and availability of weather and climate information needed by agriculturalists.

[(2) Obtain standardized weather observation data collected in near real time through State agricultural weather information systems.

[(3) Make, through the Cooperative State Research Service, competitive grants under subsection (c) for research in atmospheric sciences and climatology.

[(4) Make grants to eligible States under section 1640 to plan and administer State agricultural weather information systems.

[(5) Coordinate the activities of the Office with the weather and climate research activities of the Cooperative State Research Service, the National Academy of Sciences, the National Science Foundation Atmospheric Services Program, and the National Climate Program.

[(6) Encourage private sector participation in the National Agricultural Weather Information System through mutually beneficial cooperation with the private sector, particularly in generating weather and climatic data useful for site-specific agricultural weather forecasting.

[(c) COMPETITIVE GRANTS PROGRAM.—

[(1) GRANTS AUTHORIZED.—With funds allocated to carry out this subsection, the Secretary of Agriculture may make grants to State agricultural experiment stations, all colleges and universities, other research institutions and organizations, Federal agencies, private organizations and corporations, and individuals to carry out research in all aspects of atmospheric sciences and climatology that can be shown to be important in both a basic and developmental way to understanding, forecasting, and delivering agricultural weather information.

[(2) COMPETITIVE BASIS.—Grants made under this subsection shall be made on a competitive basis.

[(d) PRIORITY.—In selecting among applications for grants under subsection (c), the Secretary shall give priority to proposals which emphasize—

[(1) techniques and processes that relate to weather-induced agricultural losses, and to improving the advisory information on weather extremes such as drought, floods, freezes, and storms well in advance of their actual occurrence;

[(2) the improvement of site-specific weather data collection and forecasting; or

[(3) the impact of weather on economic and environmental costs in agricultural production.]

[(7 U.S.C. 5852)]

[SEC. 1639

[SEC. 1639. NATIONAL ADVISORY BOARD ON AGRICULTURAL WEATHER.

[(a) ESTABLISHMENT.—The Secretary of Agriculture shall establish the Advisory Board on Agricultural Weather (hereinafter referred to in this section as the “Board”) to advise the Director of the Agricultural Weather Office with respect to carrying out this subtitle.

[(b) COMPOSITION.—The Board shall be composed of nine members, appointed by the Secretary in consultation with the Director of the National Weather Service. Two of the members shall be from

each of the four regions of the cooperative extension service. Of the two members from each region, one shall be an agricultural producer and one shall be an agricultural or atmospheric scientist. At least two members of the Board shall be appointed from among individuals who are engaged in providing private meteorology services or consulting with a private meteorology firm.

[(c) CHAIRPERSON.—The Board shall elect a chairperson from among its members.

[(d) TERM.—Each Board member shall be appointed for a three-year term, except that to ensure that members of the Board serve staggered terms, the Secretary shall appoint three of the original members of the Board to appointments for one year, and three of the original members to appointments for two years.

[(e) MEETINGS.—The Board shall meet not less than twice annually.

[(f) COMPENSATION.—Members of the Board shall serve without compensation, but while away from their homes or regular places of business in the performance of services for the Board, members of the Board shall be allowed travel expenses, including a per diem allowance in lieu of subsistence, in the same manner as individuals employed in Government service are allowed travel expenses under section 5703 of title 5, United States Code.

[(g) FEDERAL ADVISORY COMMITTEE ACT.—Section 14(a)(2) of the Federal Advisory Committee Act (5 U.S.C. App.) shall not apply with respect to the Board.]

[(7 U.S.C. 5853)]

[SEC. 1640

[SEC. 1640. STATE AGRICULTURAL WEATHER INFORMATION SYSTEMS.

[(a) ADVISORY PROGRAM GRANTS.—

[(1) GRANTS REQUIRED.—With funds allocated to carry out this section, the Secretary of Agriculture shall make grants to not fewer than 10 eligible States to plan and administer, in cooperation with persons described in paragraph (2), advisory programs for State agricultural weather information systems.

[(2) PERSONS DESCRIBED.—The persons referred to in paragraph (1) are the Director of the Agricultural Weather Office, the Administrator of the Extension Service, the Administrator of the Cooperative State Research Service, and other persons as appropriate (such as the directors of the appropriate State agricultural experiment stations and State extension programs).

[(b) CONSULTATION.—For purposes of selecting among applications submitted by States for grants under this section, the Secretary shall take into consideration the recommendation of the Advisory Board on Agricultural Weather and consult with the Director.

[(c) ELIGIBILITY REQUIREMENTS.—To be eligible to receive a grant under this section, the chief executive officer of a State shall submit to the Secretary an application that contains—

[(1) assurances that the State will expend such grant to plan and administer a State agricultural weather system that will—

[(A) collect observational weather data throughout the State and provide such data to the National Weather Service and the Agricultural Weather Office;

[(B) develop methods for packaging information received from the national system for use by agricultural producers (with State Cooperative Extension Services and the private sector to serve as the primary conduit of agricultural weather forecasts and climatic information to producers); and

[(C) develop programs to educate agricultural producers on how to best use weather and climate information to improve management decisions; and

[(2) such other assurances and information as the Secretary may require by rule.]

[(7 U.S.C. 5854)]

[SEC. 1641]

[SEC. 1641. FUNDING.]

[(a) ALLOCATION OF FUNDS.—

[(1) COOPERATIVE WORK.—Not less than 15 percent and not more than 25 percent of the funds appropriated for a fiscal year to carry out this subtitle shall be used for cooperative work with the National Weather Service entered into under section 1638(b)(1).

[(2) COMPETITIVE GRANTS PROGRAM.—Not less than 15 percent and not more than 25 percent of such funds shall be used by the Cooperative State Research Service for a competitive grants program under section 1638(c).

[(3) WEATHER INFORMATION SYSTEMS.—Not less than 25 percent and not more than 35 percent of such funds shall be divided equally between the participating States selected for that fiscal year under section 1640.

[(4) OTHER PURPOSES.—The remaining funds shall be allocated for use by the Agricultural Weather Office and the Extension Service in carrying out generally the provisions of this subtitle.

[(b) LIMITATIONS ON USE OF FUNDS.—Funds provided under the authority of this subtitle shall not be used for the construction of facilities. Each State or agency receiving funds shall not use more than 30 percent of such funds for equipment purchases. Any use of the funds in facilitating the distribution of agricultural and climate information to producers shall be done with consideration for the role that the private meteorological sector can play in such information delivery.

[(c) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated \$5,000,000 to carry out this subtitle for each of the fiscal years 1991 through 1997.]

[(7 U.S.C. 5855)]

“Subtitle D—National Agricultural Weather Information System

“SEC. 1637. SHORT TITLE; PURPOSES.

“(a) SHORT TITLE.—This subtitle may be cited as the ‘National Agricultural Weather Information System Act of 1997.’

“(b) PURPOSES.—The purposes of this subtitle are—

“(1) to facilitate the management and coordination of a national agricultural weather and climate station network for

Federal and State agencies, colleges and universities, and the private sector;

“(2) to ensure that timely and accurate information is obtained and disseminated; and

“(3) to aid research and education that requires a comprehensive agricultural weather and climate database.

“SEC. 1638. AGRICULTURAL WEATHER SYSTEM.

“(a) ESTABLISHMENT.—The Secretary of Agriculture may establish the National Agricultural Weather Information System (referred to in this subtitle as the ‘System’). The System shall be comprised of the operational and research activities of the Federal, State, and regional agricultural weather information systems.

“(b) AUTHORITY.—Notwithstanding chapter 63 of title 31, United States Code, to carry out this subtitle, the Secretary may—

“(1) enter into contracts, grants, cooperative agreements and interagency agreements without regard to competitive requirements, except as otherwise provided in this subtitle, with other Federal and State agencies to—

“(A) support operational weather and climate data observations, analysis, and derived products;

“(B) preserve historical data records for research studies useful in agriculture;

“(C) jointly develop improved computer models and computing capacity for storage, retrieval, dissemination and analysis of agricultural weather and climate information;

“(D) enhance the quality and availability of weather and climate information needed by the private sector for value-added products and agriculturalists for decisionmaking; and

“(E) sponsor joint programs to train private sector meteorologists and agriculturalists about the optimum use of agricultural weather and climate data;

“(2) obtain standardized weather observation data collected in near real time through regional and State agricultural weather information systems;

“(3) coordinate the activities of the Chief Meteorologist of the Department of Agriculture and weather and climate research activities of the Department of Agriculture with other Federal agencies and the private sector;

“(4) make grants to plan and administer State and regional agricultural weather information systems, including research in atmospheric sciences and climatology;

“(5) encourage private sector participation in the System through cooperation with the private sector, including cooperation in the generation of weather and climate data useful for site-specific agricultural weather forecasting; and

“(6) make competitive grants to carry out research in all aspects of atmospheric sciences and climatology regarding the collection, retention, and dissemination of agricultural weather and climate observations and information with priority given to proposals that emphasize—

“(A) techniques and processes that relate to—

“(i) weather- or climate-induced agricultural losses; and

“(ii) improvement of information on weather and climate extremes (such as drought, floods, freeze, and storms) well in advance of their occurrence;

“(B) the improvement of site-specific weather data collection and forecasting;

“(C) the impact of weather on economic and environmental costs in agricultural production; or

“(D) the preservation and management of the ecosystem.

“SEC. 1639. FUNDING AND ADMINISTRATION.

“(a) **USE OF FUNDS.**—

“(1) **NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION WORK.**—Not more than $\frac{2}{3}$ of the funds made available for a fiscal year to carry out this subtitle shall be used for work with the National Oceanic and Atmospheric Administration.

“(2) **ADMINISTRATIVE COSTS.**—The Secretary of Agriculture may retain for administration of the System up to 4 percent of the amounts made available to carry out this subtitle, notwithstanding the availability of any appropriation for administrative expenses to carry out this subtitle.

“(3) **LIMITATIONS.**—

“(A) **BUILDINGS OR FACILITIES.**—Funds made available to carry out this subtitle shall not be used for the planning, repair, rehabilitation, acquisition, or construction of a building or facility.

“(B) **EQUIPMENT PURCHASES.**—Of funds made available under a grant award under this subtitle, a grantee may use for equipment purchases not more than the lesser of—

“(i) \$15,000; or

“(ii) $\frac{1}{3}$ of the amount of the grant award.

“(b) **APPLICABILITY OF OTHER LAWS.**—The Federal Advisory Committee Act (5 U.S.C. App.) and title XVIII of the Food and Agriculture Act of 1977 (7 U.S.C. 2281 et seq.) shall not apply to a panel or board created for the purpose of reviewing applications or proposals submitted for grants under section 1638.

“SEC. 1640. AUTHORIZATION OF APPROPRIATIONS.

“There is authorized to be appropriated to carry out this subtitle \$15,000,000 for each of fiscal years 1998 through 2002.”. . .

“SEC. 1670 repealed”

[SEC. 1671. PLANT GENOME MAPPING PROGRAM.

[SEC. 1671

[(a) PROGRAM REQUIRED.—The Secretary of Agriculture (hereinafter in this section referred to as the “Secretary”) shall conduct a research program for the purpose of—

[(1) supporting basic and applied research and technology development in the area of plant genome structure and function;

[(2) providing United States leadership in biotechnology; and

[(3) providing crop varieties that may be cultivated profitably without negatively impacting the environment.

[(b) COMPETITIVE GRANTS.—The Secretary may make competitive grants, for periods not to exceed five years, to State agricultural experiment stations, all colleges and universities, other research institutions and organizations, Federal agencies, private or-

ganizations or corporations, and individuals for research projects in the research areas identified in subsection (c).

[(c) RESEARCH AREAS.—Grants available under subsection (b) shall be awarded in the following research areas:

[(1) Construction of plant genome maps.

[(2) Identification, characterization, transfer, and expression of genes of agricultural importance.

[(3) Technology development in the areas of plant genome mapping, sequencing, gene transfer, and data management.

[(4) Research on microorganisms associated with plants, such as plant pathogens and plant symbionts.

[(d) PLAN FOR MAKING GRANTS.—Not later than 90 days after the date of the enactment of this Act, the Secretary shall submit to the Congress a detailed plan for awarding grants under this section.

[(e) COORDINATION OF EFFORTS.—The Secretary shall coordinate activities under this section with related activities sponsored by the National Science Foundation, the National Institutes of Health, the Department of Energy, and the Department of Commerce.

[(f) PROPRIETARY INTERESTS.—The Secretary shall require (when the Secretary considers it to be appropriate) licensing and patent agreements, copyright fees, royalties, or other fee arrangements on the sales of products and new uses, applications, technologies, or processes developed through assistance provided under this section.

[(g) AUTHORIZATIONS OF APPROPRIATIONS.—There are authorized to be appropriated for fiscal years 1996 and 1997 such sums as may be necessary to carry out this section.]

[(7 U.S.C. 5924)]

“SEC. 1671. NATIONAL FOOD GENOME STRATEGY.

“(a) PURPOSES.—The purposes of this section are—

“(1) to expand the knowledge of public and private sector entities and persons concerning genomes for species of importance to the food and agriculture sectors in order to maximize the return on the investment in plant, animal, and microbial genomics;

“(2) to focus on the species that will yield early, scientifically important results that will enhance the usefulness of many plant, animal, and microbial species;

“(3) to build on genomic research, such as the Human Genome Initiative and the Arabidopsis Genome Project, to understand gene structure and function that is expected to have considerable payoffs in crop species ranging from corn to soybean to cotton and animal species ranging from cattle to swine to poultry;

“(4) to develop improved bioinformatics to enhance both sequence or structure determination and analysis of the biological function of genes and gene products;

“(5) to develop, within the National Food Genome Strategy required under subsection (b) for agriculturally important plants, animals, and microbes, a Plant Genome Initiative under which—

“(A) the Plant Genome Initiative will be an interagency activity conducted with—

“(i) the Department of Agriculture as the lead Federal agency; and

“(ii) the National Science Foundation and the Department of Energy as participants; and

“(B) the National Institutes of Health will continue to invest in the underlying critical technologies through its Human Genome Project and other genetics research;

“(6) to establish, within the National Food Genome Strategy, an Animal Genome Initiative—

“(A) to address the obstacles limiting the development and implementation of gene-based approaches for animal improvement, such as high-resolution genomic maps; and

“(B) to take advantage of complementary work of the Human Genome Initiative, the Agricultural Research Service, and State agricultural experiment stations;

“(7) to encourage Federal Government participants to maximize the utility of public and private partnerships for food genome research;

“(8) to allow resources developed under this section, including data, software, germplasm, and other biological materials, to be openly accessible to all persons, subject to any confidentiality requirements imposed by law; and

“(9) to encourage international partnerships with each partner country responsible for financing its own strategy for food genome research.

“(b) DUTIES OF SECRETARY.—The Secretary of Agriculture (referred to in this section as the ‘Secretary’) shall develop and carry out a National Food Genome Strategy to—

“(1) study and map agriculturally significant genes to achieve sustainable and secure agricultural production;

“(2) ensure that current gaps in existing agricultural genetics knowledge are filled;

“(3) identify and develop a functional understanding of genes responsible for economically important traits in plants, animals, and microbes of importance to agriculture;

“(4) ensure future genetic improvement of agriculturally important species;

“(5) support preservation of diverse germplasm;

“(6) ensure preservation of biodiversity to maintain access to genes that may be of importance in the future; and

“(7) otherwise carry out the purposes of this section.

“(c) CONTRACTS, GRANTS, AND COOPERATIVE AGREEMENTS.—

“(1) IN GENERAL.—The Secretary may enter into or make contracts, grants, or cooperative agreements with individuals and organizations in accordance with section 1472 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3318).

“(2) COMPETITIVE BASIS.—A grant under this subsection shall be made on a competitive basis.

“(d) ADMINISTRATION.—

“(1) REGULATIONS.—The Secretary shall promulgate such regulations as are necessary to carry out this section.

“(2) CONSULTATION WITH THE NATIONAL ACADEMY OF SCIENCES.—The Secretary may use funds made available under

this section to consult with the National Academy of Sciences regarding the administration of the National Food Genome Strategy without regard to the requirements of the Federal Advisory Committee Act (5 U.S.C. App.) or title XVIII of the Food and Agriculture Act of 1977 (7 U.S.C. 2281 et seq.).

“(3) INDIRECT COSTS.—Indirect costs under this section shall be allowable at the rate indirect costs are allowable for contracts, grants, or cooperative agreements entered into or made by the National Science Foundation for genomic research.”

SEC. 1672. SPECIALIZED RESEARCH PROGRAMS.

[(a) BROWN CITRUS APHID AND CITRUS TRISTEZA VIRUS.—

[(1) RESEARCH GRANTS AUTHORIZED.—The Secretary of Agriculture may make competitive grants available to support research for the purpose of—

[(A) developing methods to eradicate the brown citrus aphid and the citrus tristeza virus from citrus crops grown in the United States; or

[(B) adapting citrus crops grown in the United States to the brown citrus aphid and the citrus tristeza virus.

[(2) METHOD OF PROVIDING GRANTS.—Grants authorized under this subsection shall be made in the same manner, and shall be subject to the same conditions, as provided for competitive grants under the Competitive, Special, and Facilities Research Grant Act (7 U.S.C. 450i).

[(3) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this subsection \$3,000,000 for fiscal year 1997.]

[(b)] (a) ETHANOL RESEARCH.— . . .

[(c)] (b) AFLATOXIN RESEARCH.— . . .

[(d) MESQUITE RESEARCH.—

[(1) RESEARCH REQUIRED.—The Secretary of Agriculture shall conduct a research program for the purpose of developing enhanced production methods and commercial uses of mesquite.

[(2) COMPETITIVE GRANTS.—The Secretary shall make competitive grants, for periods not to exceed 5 years, to a State agricultural experiment station, a college or university, or a consortium of such entities, for a research project in the research areas identified in paragraph (3).

[(3) RESEARCH AREAS.—A grant available under paragraph (2) shall be awarded to an applicant to conduct research in—

[(A) the development of techniques to produce, from small-diameter, short-length, or otherwise irregular mesquite logs, solid-wood products useful as flooring, furniture parts, turning blanks, and such other uses as may have potential economic value;

[(B) the development of management techniques designed to improve stands for quality lumber production from mesquite; and

[(C) such other methods of production, harvesting, processing, and marketing that are designed to provide viable markets for mesquite and lead to the commercialization of mesquite as a cash crop.

[(4) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated \$100,000 for each of the fiscal years 1991 through 1997 to carry out this subsection.

[(e) PRICKLY PEAR RESEARCH.—

[(1) RESEARCH REQUIRED.—The Secretary of Agriculture shall conduct a research program for the purpose of investigating enhanced genetic selection and processing techniques of prickly pears.

[(2) COMPETITIVE GRANTS.—The Secretary shall make competitive grants, for periods not to exceed 5 years, to a State agricultural experiment station, a college or university, or a consortium of such entities, for research projects in the research areas identified in paragraph (3).

[(3) RESEARCH AREAS.—A grant available under paragraph (2) shall be awarded to an applicant to conduct research—

[(A) to investigate, through genetic selection, the development of varieties of prickly pear with improved growth, freeze tolerance, and harvest characteristics;

[(B) to develop techniques to produce and process prickly pear as a food source; and

[(C) to continue to investigate the nutritional value and health benefits of prickly pears.

[(4) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated \$100,000 for each of the fiscal years 1991 through 1997 to carry out this subsection.

[(f) DEER TICK ECOLOGY AND RELATED RESEARCH.—There are authorized to be appropriated \$250,000 for each of the fiscal years 1991 through 1997 to be used by the Secretary of Agriculture, acting through the Cooperative State Research Service, to make competitive grants to assist research in the field of population ecology of deer ticks and other insects and pests which transmit Lyme disease.]

[(g)] (c) ADMINISTRATIVE PROVISIONS.—. . .

“(d) IMPORTED FIRE ANT CONTROL, MANAGEMENT, AND ERADICATION.—

“(1) NATIONAL ADVISORY AND IMPLEMENTATION BOARD ON IMPORTED FIRE ANT CONTROL, MANAGEMENT, AND ERADICATION.—

“(A) ESTABLISHMENT.—The Secretary of Agriculture may establish a National Advisory and Implementation Board on Imported Fire Ant Control, Management, and Eradication (referred to in this subsection as the ‘Board’).

“(B) MEMBERSHIP.—The Board shall consist of 12 members who are experts in entomology, ant ecology, wildlife biology, electrical engineering, economics, or agribusiness and who are appointed by the Secretary from academia, research institutes, and the private sector.

“(C) COMPENSATION.—

“(i) IN GENERAL.—A member of the Board shall not receive any compensation by reason of service on the Board.

“(ii) EXPENSES.—A member of the Board shall be reimbursed for travel, subsistence, and other necessary expenses incurred by the member in the performance of a duty of the member.

“(D) TERMINATION.—The Board shall terminate 60 days after the date on which the national plan is submitted to the Board under paragraph (4)(B).”

“(2) INITIAL GRANTS.—”

“(A) REQUEST FOR PROPOSALS.—”

“(i) IN GENERAL.—The Secretary shall publish a request for proposals for grants for research or demonstration projects related to the control, management, and possible eradication of imported fire ants.”

“(ii) INPUT FROM BOARD.—In developing a request for proposals under clause (i), the Secretary shall solicit and consider input from the Board.”

“(B) SELECTION.—Not later than 1 year after the date of publication of the request for proposals, the Secretary shall evaluate and select meritorious research or demonstration projects related to the control, management, and possible eradication of imported fire ants.”

“(C) GRANTS.—The Secretary may award a total of \$6,000,000 for each fiscal year in grants to colleges, universities, research institutes, Federal laboratories, or private entities selected under subparagraph (B), for a term of not to exceed 5 years, for the purpose of conducting research or demonstration projects related to the control, management, and possible eradication of imported fire ants. Each project shall be completed not later than the end of the term of the grant.”

“(3) SUBSEQUENT GRANTS.—”

“(A) EVALUATION; SELECTION.—If the Secretary awards grants under paragraph (2)(C), the Secretary shall—”

“(i) evaluate all of the research or demonstration projects conducted under paragraph (2)(C) for their use as the basis of a national plan for the control, management, and possible eradication of imported fire ants by the Federal Government, State and local governments, and owners and operators of land; and

“(ii) on the basis of the evaluation, select the projects the Secretary considers most promising for additional research or demonstration related to the control, management, and possible eradication of imported fire ants and notify the Board of the selection.”

“(B) GRANTS.—The Secretary may award a grant of up to \$4,000,000 for each fiscal year to each of the colleges, universities, research institutes, Federal laboratories, or private entities selected under subparagraph (A)(ii) for the purpose of conducting research or demonstration projects for the preparation of a national plan for the control, management, and possible eradication of imported fire ants. Each project shall be completed not later than 2 years after the grant is made.”

“(4) NATIONAL PLAN.—”

“(A) EVALUATION; SELECTION.—If the Secretary awards grants under paragraph (3)(B), the Secretary shall—”

“(i) evaluate all of the research or demonstration projects conducted under paragraph (3)(B) for their use

as the basis of a national plan for the control, management, and possible eradication of imported fire ants by the Federal Government, State and local governments, and owners and operators of land; and

“(ii) on the basis of the evaluation, select 1 project funded under paragraph (3)(B), or a combination of grant projects, as the basis for the plan and notify the Board of the selection.

“(B) GRANT.—The Secretary may award a grant of up to \$5,000,000 to the sponsor or sponsors of the grant project selected under subparagraph (A)(ii) for the purpose of the final preparation of the national plan for the control, management, and possible eradication of imported fire ants that is based on the project. If the Secretary awards a grant under this subparagraph, the national plan shall be completed, and submitted to the Board, not later than 1 year after the grant is made.

“(C) REPORT TO CONGRESS.—Not later than 60 days after the plan is submitted to the Board under subparagraph (B), the Secretary shall submit to Congress the national plan for the control, management, and possible eradication of imported fire ants.

“(5) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated such sums as are necessary to carry out this subsection for each of fiscal years 1998 through 2002.”. . .

“(1) A*DEC.—The term ‘A*DEC’ means the distance education consortium known as A*DEC.”

[(1)] (2) The term “eligible institution”. . .

[(2)] (3) The term “communications network”. . .

[(3)] (4) The term “delivery”. . .

[(4)] (5) The term “facilities”. . .

[(5)] (6) The term “satellite ground station complex”. . .

“(7) SECRETARY.—The term ‘Secretary’ means the Secretary of Agriculture, acting through A*DEC.”

(d) AUTHORIZATION OF ASSISTANCE TO ELIGIBLE INSTITUTIONS.—(1) [The Secretary shall establish a program, to be administered by the Assistant Secretary for Science and Education] “The Secretary of Agriculture shall establish a program, to be administered through a grant provided to A*DEC under terms and conditions established by the Secretary of Agriculture,”. . .

(2) Eligible institutions shall request assistance by submitting applications to the [Assistant Secretary for Science and Education] “A*DEC”. Applications shall include—. . .

(h) AUTHORIZATION OF APPROPRIATIONS.—For the purposes of implementing the program established under this section, there are hereby authorized to be appropriated not more than \$12,000,000 for each of the fiscal years 1991 through [1997] “2002”. . .

“Sec.1675 repealed”

“Sec.1676 repealed”

SEC. 1680. ASSISTIVE TECHNOLOGY PROGRAM FOR FARMERS WITH DISABILITIES.

(a) SPECIAL DEMONSTRATION GRANTS.—. . .

(5) MINIMUM AMOUNT.—A grant awarded under this subsection may not be less than \$150,000.

[(6) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this subsection—

[(A) not less than \$3,000,000 for each of the fiscal years 1991 and 1992; and

[(B) not less than \$5,000,000 for each of the fiscal years 1993 through 1997.]

(b) NATIONAL GRANT FOR TECHNICAL ASSISTANCE, TRAINING AND [DISSEMINATION.—]

[(1) IN GENERAL.—The] “DISSEMINATION.—The” . . .

[(2) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated \$1,000,000 to carry out this subsection for each of the fiscal years 1991 through 1997.]

“(c) AUTHORIZATION OF APPROPRIATIONS.—

“(1) IN GENERAL.—Subject to paragraph (2), there is authorized to be appropriated to carry out this section \$6,000,000 for each of fiscal years 1998 through 2002.

“(2) NATIONAL GRANT.—Not more than 15 percent of the amounts made available under paragraph (1) for a fiscal year shall be used to carry out subsection (b).”

SEC. 2381. NATIONAL RURAL INFORMATION CENTER CLEARINGHOUSE. . . .

(e) LIMITATION ON AUTHORIZATION OF APPROPRIATIONS.—To carry out this section, there are authorized to be appropriated \$500,000 for each of the fiscal years 1991 through [1995] “2002”.

NATIONAL AGRICULTURAL RESEARCH, EXTENSION, AND TEACHING POLICY ACT OF 1977. . .

SEC. 1402. [7 U.S.C. 3101] PURPOSES “AND MANAGEMENT PRINCIPLES” OF AGRICULTURAL RESEARCH, EXTENSION, AND EDUCATION.

SEC. 1402

(a) “PURPOSES.—”

The purposes of federally supported agricultural research, extension, and education are to—

(8) maintain an adequate, nutritious, and safe supply of food to meet human nutritional needs and requirements.

“(b) MANAGEMENT PRINCIPLES.—To the maximum extent practicable, the Secretary shall ensure that federally supported and conducted agricultural research, education, and extension activities are accomplished in a manner that—

“(1) integrates agricultural research, education, and extension functions to better link research to technology transfer and information dissemination activities;

“(2) encourages regional and multistate programs to address relevant issues of common concern and to better leverage scarce resources;

“(3) achieves agricultural research, education, and extension objectives through multi-institutional and multifunctional approaches and by conducting research at facilities and institutions best equipped to achieve those objectives; and

“(4) requires accountability to be measured against shared national goals of the research, education, and economics mission area agencies of the Department and their partners that receive Federal research, extension, and higher education funds,

consistent with the Government Performance and Results Act of 1993 (Public Law 103-62) and amendments made by that Act.”.

SEC. 1408. NATIONAL AGRICULTURAL RESEARCH, EXTENSION, EDUCATION, AND ECONOMICS ADVISORY BOARD. . . .

(b) MEMBERSHIP.—. . .

“(7) *EQUAL REPRESENTATION OF PUBLIC AND PRIVATE SECTOR MEMBERS.*—In appointing members to serve on the Advisory Board, the Secretary shall ensure, to the maximum extent practicable, equal representation of public and private sector members.”. . .

“(d) *NOTIFICATION OF ADVISORY BOARD AND CONGRESS.*—

“(1) *ADVISORY BOARD.*—The Secretary shall provide a written response to the Advisory Board regarding the implementation of any written recommendations made by the Advisory Board to the Secretary under subsection (c).

“(2) *CONGRESS.*—The Secretary shall provide to the Committee on Agriculture of the House of Representatives and the Committee on Agriculture, Nutrition, and Forestry of the Senate a copy of the response of the Secretary to an Advisory Board recommendation concerning the priority mission areas of the Initiative for Future Agriculture and Food Systems established under section 301(c)(2)(B) of the Agricultural Research, Extension, and Education Reform Act of 1997.”. . .

[(d)] “(e) *CONSULTATION.*—In carrying out this section, the Advisory Board shall solicit opinions and recommendations from persons who will benefit from and use federally funded agricultural research, extension, education, and economics.

[(e)] “(f) *APPOINTMENT.*—A member of the Advisory Board shall be appointed by the Secretary for a term of up to 3 years. The members of the Advisory Board shall be appointed to serve staggered terms.

[(f)] “(g) *FEDERAL ADVISORY COMMITTEE ACT.*—The Advisory Board shall be deemed to have filed a charter for the purpose of section 9(c) of the Federal Advisory Committee Act (5 U.S.C. App.).

[(g)] “(h) *TERMINATION.*—The Advisory Board shall remain in existence until September 30, 2002. . . .

SEC. 1412. SUPPORT FOR ADVISORY BOARD.

(a) To assist the Advisory Board in the performance of [their duties] “its duties”,. . .

(b) The Secretary shall provide such additional clerical assistance and staff personnel as may be required to assist the Advisory Board in carrying out [their duties] “its duties”.

(c) In formulating [their recommendations] “its recommendations” to the Secretary,. . .

SEC. 1413. (a) Any vacancy in the Advisory Board shall not affect [their powers] “its duties” under this title and shall be filled in the same manner as the original position.

(b) Members of the [Joint Council, the Advisory Board] “Advisory Board” shall serve without compensation . . .

SEC. 1417. GRANTS AND FELLOWSHIPS FOR FOOD AND AGRICULTURAL SCIENCES EDUCATION. . . .

(b) GRANTS.—. . .

(6) to conduct graduate and postdoctoral fellowship programs to attract highly promising individuals to research or teaching careers in the food and agricultural sciences.

“(c) PRIORITIES.—In awarding grants under subsection (b), the Secretary shall give priority to—

“(1) applications for teaching enhancement projects that demonstrate enhanced coordination among all types of institutions eligible for funding under this section; and

“(2) applications for teaching enhancement projects that focus on innovative, multidisciplinary education programs, material, and curricula.”

[(c)] (d) ELIGIBILITY FOR GRANTS.— . . .

(3) RESEARCH FOUNDATIONS.—An eligible college or university under subsection (b) includes a research foundation maintained by the college or university.

“(e) FOOD AND AGRICULTURAL EDUCATION INFORMATION SYSTEM.—From amounts made available for grants authorized under this section, the Secretary may maintain a national food and agricultural education information system that contains information on enrollment, degrees awarded, faculty, and employment placement in the food and agricultural sciences and such other information as the Secretary considers appropriate.”

[(d)] (f) EVALUATION OF TEACHING PROGRAMS.— . . .

[(e)] (g) CONTINUING EDUCATION.— . . .

[(f)] (h) TRANSFERS OF FUNDS AND FUNCTIONS.— . . .

[(g)] (i) NATIONAL FOOD AND AGRICULTURAL SCIENCES TEACHING AWARDS.— . . .

[(h)] (j) SECONDARY EDUCATION AND 2-YEAR POSTSECONDARY EDUCATION TEACHING PROGRAMS.— . . .

[(i)] (k) ADMINISTRATION.— . . .

[(j)] (l) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated for carrying out this section \$60,000,000 for each of the fiscal years 1990 through **[1997]** “2002”. . .

SEC. 1419 . . .

(d) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated for the purposes of carrying out this section \$20,000,000 for each of the fiscal years 1991 through **[1997]** “2002”. . .

SEC. 1419A. POLICY RESEARCH CENTERS.

(a) IN GENERAL.—Consistent with this section, the Secretary may make grants, competitive grants, and special research grants to, and enter into cooperative agreements and other contracting instruments with, policy research centers described in subsection (b) to conduct research and education programs that are objective, operationally independent, and external to the Federal Government and that concern the effect of public policies “and trade agreements”. . .

(d) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated such sums as are necessary to carry out this section for **[fiscal years 1996 and 1997]** “each of fiscal years 1996 through 2002”. . .

[SEC. 1424A

[SEC. 1424A. [7 U.S.C. 3174a] PILOT RESEARCH PROGRAM TO COMBINE MEDICAL AND AGRICULTURAL RESEARCH.

[(a) FINDINGS.—Congress finds the following:

[(1) Although medical researchers in recent years have demonstrated that there are several naturally occurring compounds in many vegetables and fruits that can aid in the prevention of certain forms of cancer, coronary heart disease, stroke, and atherosclerosis, there has been almost no research conducted to enhance these compounds in food plants by modern breeding and molecular genetic methods.

[(2) By linking the appropriate medical and agricultural research scientists in a highly-focused, targeted research program, it should be possible to develop new varieties of vegetables and fruits that would provide greater prevention of diet-related diseases that are a major cause of death in the United States.

[(b) PILOT RESEARCH PROGRAM.—The Secretary shall conduct, through the Cooperative State Research, Education, and Extension Service, a pilot research program to link major cancer and heart and other circulatory disease research efforts with agricultural research efforts to identify compounds in vegetables and fruits that prevent these diseases. Using information derived from such combined research efforts, the Secretary shall assist in the development of new varieties of vegetables and fruits having enhanced therapeutic properties for disease prevention.

[(c) AGREEMENTS.—The Secretary shall carry out the pilot program through agreements entered into with land-grant colleges or universities, other universities, State agricultural experiment stations, the State cooperative extension services, nonprofit organizations with demonstrable expertise, or Federal or State governmental entities. The Secretary shall enter into the agreements on a competitive basis.

[(d) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated \$10,000,000 for fiscal year 1997 to carry out the pilot program.】

SEC. 1425. NUTRITION EDUCATION PROGRAM. . . .

(c) Beginning with the fiscal year ending September 30, 1982—

. . .

(3) There is authorized to be appropriated to carry out the expanded food and nutrition education program established under section 3(d) of the Act of May 8, 1914 (38 Stat. 373, chapter 79; 7 U.S.C. 343(d) and this section, \$83,000,000 for each of fiscal years 1996 [and 1997] “*through 2002*” . . .

SEC. 1433. APPROPRIATIONS FOR CONTINUING ANIMAL HEALTH AND DISEASE RESEARCH PROGRAMS.

SEC. 1433. (a) There are authorized to be appropriated such funds as Congress may determine necessary to support continuing animal health and disease research programs at eligible institutions, but not to exceed \$25,000,000 for each of the fiscal years 1991 through [1997] “*2002*”, . . .

SEC. 1434. APPROPRIATIONS FOR RESEARCH ON NATIONAL OR REGIONAL PROBLEMS. . . .

(a) There are authorized to be appropriated such funds as Congress may determine necessary to support research on specific na-

tional or regional animal health or disease problems, or national or regional problems relating to pre-harvest, on-farm food safety, or animal well-being, but not to exceed \$35,000,000 for each of the fiscal years 1991 through [1997] “2002”. . .

SEC. 1447. GRANTS TO UPGRADE AGRICULTURAL AND FOOD SCIENCES FACILITIES AT 1890 LAND-GRANT COLLEGES, INCLUDING TUSKEGEE UNIVERSITY. . . .

(b) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated to the Secretary of Agriculture for the purposes of carrying out the provisions of this section, \$15,000,000 for each of fiscal years 1996 [and 1997] “*through 2002*”, and such sums shall remain available until expended. . . .

(c) **USE OF GRANT FUNDS.**—Four percent of the sums appropriated pursuant to this section shall be available to the Secretary for administration of this grants program. The remaining funds shall be available for grants to eligible institutions for the purpose of assisting them in the purchase of equipment and land, the planning, construction, alteration, or renovation of buildings to strengthen their capacity in the production of human capital in the food and agricultural sciences and can be used at the discretion of the eligible institutions in the areas of research, extension, and resident instruction or any combination thereof.

(d) **METHOD OF AWARDING GRANTS.**—Grants awarded pursuant to this section shall be made in such amounts and under such terms and conditions as the Secretary shall determine necessary for carrying out the purposes of this section.

(e) **PROHIBITION OF CERTAIN USES.**—Federal funds provided under this section may not be utilized for the payment of any overhead costs of the eligible institutions.

(f) **REGULATIONS.**—The Secretary may promulgate such rules and regulations as the Secretary may consider necessary to carry out the provisions of this section.

SEC. 1448. NATIONAL RESEARCH AND TRAINING CENTENNIAL CENTERS. . . .

(1) have been designated by the Secretary for the fiscal years 1991 through 1995, or fiscal years 1996 [and 1997] “*through 2002*”, . . .

(f) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated \$2,000,000 for each of the fiscal years 1991 through [1997] “2002” for grants under this section . . .

SEC. 1455. EDUCATION GRANTS PROGRAMS FOR HISPANIC-SERVING INSTITUTIONS. . . .

(c) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated to make grants under this section \$20,000,000 for [fiscal year 1997] “*each of fiscal years 1997 through 2002*”.

Subtitle I—International Agricultural Research and Extension

SEC. 1458. INTERNATIONAL AGRICULTURAL [RESEARCH AND EXTENSION] “RESEARCH, EXTENSION, AND TEACHING”. . . .

SEC. 1458.

(1) expand the operational coordination of the Department of Agriculture with institutions and other persons throughout the world performing agricultural and [related research and exten-

sion] “*related research, extension, and teaching*” activities by—

... (B) conducting with the institutions or persons joint or coordinated [research and extension on] “*research, extension, and teaching initiatives addressing*”. . .

(2) enter into cooperative arrangements with Departments and Ministries of Agriculture in other nations to conduct research, extension, and [education] “*teaching*”. . .

(4) further develop within the Department highly qualified and experienced [scientists and experts] “*scientists and education experts*”. . .

(5) work with transitional and more advanced countries in food, agricultural, and related research, development, “*teaching*,” and extension (including providing technical assistance, training, and advice to persons from the countries engaged in the activities and the stationing of scientists and other specialists at national and international institutions in the countries);

(6) expand collaboration and coordination with the Agency for International Development regarding food and agricultural research, extension, and [education] “*teaching*” programs in developing countries;

(7) assist colleges and universities in strengthening their capabilities for food, agricultural, and related [research and extension] “*research, extension, and teaching*”. . .

(C) the provision of support for the internationalization of resident instruction programs of the universities and colleges described in subparagraph (A); [and]

(8) continue, in cooperation with the Secretary of State, a program, coordinated through the International Arid Land Consortium, to enhance collaboration and cooperation between institutions possessing [research capabilities] “*research, extension, and teaching capabilities*” applied to the development, management, and reclamation of arid lands[.] “; and”

“(9) *make competitive grants for collaborative projects that—*

“(A) *involve Federal scientists or scientists from land-grant colleges and universities or other colleges and universities with scientists at international agricultural research centers in other nations, including the international agricultural research centers of the Consultative Group on International Agriculture Research;*

“(B) *focus on developing and using new technologies and programs for—*

“(i) *increasing the production of food and fiber, while safeguarding the environment worldwide and enhancing the global competitiveness of United States agriculture; or*

“(ii) *training scientists;*

“(C) *are mutually beneficial to the United States and other countries; and*

“(D) *encourage private sector involvement and the leveraging of private sector funds.*”

(b) ENHANCING LINKAGES.—The Secretary shall draw upon and enhance the resources of the land-grant colleges and universities, and other colleges and universities, for developing linkages among

these institutions, the Federal Government, international research centers, and [counterpart agencies] “counterpart research, extension, and teaching agencies”. . .

“(d) *REPORTS.*—The Secretary shall provide biennial reports to the Committee on Agriculture of the House of Representatives and the Committee on Agriculture, Nutrition, and Forestry of the Senate on efforts of the Federal Government to—

“(1) coordinate international agricultural research within the Federal Government; and

“(2) more effectively link the activities of domestic and international agricultural researchers, particularly researchers of the Agricultural Research Service.” . . .

Subtitle K—Funding and Miscellaneous Provisions

“SEC. 1461. GENERAL ADMINISTRATIVE COSTS.

“(a) *IN GENERAL.*—Except as otherwise provided in law, indirect costs charged against a grant described in subsection (b) shall not exceed 25 percent of the total Federal funds provided under the grant award, as determined by the Secretary.

“(b) *APPLICABILITY.*—Subsection (a) shall apply to—

“(1) a competitive research grant made under subsection (b) of the Competitive, Special, and Facilities Research Grant Act (7 U.S.C. 450i(b)); and

“(2) except as otherwise provided in law, a competitive research, extension, or education grant made under—

“(A) section 793 of the Federal Agriculture Improvement and Reform Act of 1996 (7 U.S.C. 2204f); or

“(B) section 301 of the Agricultural Research, Extension, and Education Reform Act of 1997.”

SEC. 1463. AUTHORIZATION FOR APPROPRIATIONS FOR EXISTING AND CERTAIN NEW AGRICULTURAL RESEARCH PROGRAMS. . . .

(a) Notwithstanding any authorization for appropriations for a agricultural research in any Act enacted prior to the date of enactment of this title, there are hereby authorized to be appropriated for the purposes of carrying out the provisions of this title, except sections 1417, 1419, 1420, and the competitive grants program provided for in section 1414, and except that the authorization for moneys provided under the Act of March 2, 1887 (24 Stat. 440–442, as amended; 7 U.S.C. 361a–361i), is excluded and is provided for in subsection (b) of this section, \$850,000,000 for each of the fiscal years 1991 through [1997] “2002”.

(b) Notwithstanding any authorization for appropriations for agricultural research at State agricultural experiment stations in any Act enacted prior to the date of enactment of this title, there are hereby authorized to be appropriated for the purpose of conducting agricultural research at State agricultural experiment stations pursuant to the Act of March 2, 1887 (24 Stat. 440–442, as amended; 7 U.S.C. 361a–361i), \$310,000,000 for each of the fiscal years 1991 through [1997] “2002”. . . .

SEC. 1464. Notwithstanding any authorization for appropriations for the Cooperative Extension Service in any Act enacted prior to the date of enactment of this title, there are hereby authorized to be appropriated for the purposes of carrying out the extension pro-

grams of the Department of Agriculture \$420,000,000 for fiscal year 1991, \$430,000,000 for fiscal year 1992, \$440,000,000 for fiscal year 1993, \$450,000,000 for fiscal year 1994, and \$460,000,000 for each of fiscal years 1995 through [1997]“2002”. . . .

SEC. 1468. WITHHOLDING OF FUNDS.

[SEC. 1468. [7 U.S.C. 3314] Except as provided elsewhere in this Act or any other Act of Congress, if the Secretary determines that an institution or State is not entitled to receive its allotment of an annual appropriation under any provision of this title because of a failure to satisfy requirements of this title or regulations issued under it, the Secretary shall withhold such amounts, the facts and reasons concerning the determination and withholding shall be reported to the President, and the amount involved shall be deposited in the miscellaneous receipts of the Treasury.

[SEC. 1469. AUDITING, REPORTING, BOOKKEEPING, AND ADMINISTRATIVE REQUIREMENTS

[Except as provided elsewhere in this Act or any other Act of Congress—]

“SEC. 1469. AUDITING, REPORTING, BOOKKEEPING, AND ADMINISTRATIVE REQUIREMENTS.

“(a) *IN GENERAL.—Except as*. . .

[(3) three per centum of the appropriations shall be retained by the Secretary for the administration of the programs authorized under this title; and]

“(3) *the Secretary may retain up to 4 percent of amounts appropriated for agricultural research, extension, and teaching assistance programs for the administration of those programs authorized under this or any other Act; and*. . .

“(b) *COMMUNITY FOOD PROJECTS.—The Secretary may retain, for the administration of community food projects under section 25 of the Food Stamp Act of 1977 (7 U.S.C. 2034), 4 percent of amounts available for the projects, notwithstanding the availability of any appropriation for administrative expenses of the projects.*. . .

SEC. 1473A. COST-REIMBURSABLE AGREEMENTS.

Notwithstanding any other provision of law, the Secretary of Agriculture may enter into cost-reimbursable agreements with State cooperative institutions “*or other colleges and universities*”. . .

SEC. 1473D. (a) Notwithstanding any other provision of law, during the period beginning October 1, 1986, and ending September 30, [1997] “2002”. . .

[SEC. 1476.

[SEC. 1476. [7 U.S.C. 3323] AQUACULTURE RESEARCH FACILITIES.

[(a) GRANT AUTHORIZED.—In order to gain further knowledge of intensive water recirculating aquaculture systems, the Secretary may make grants for the purpose of further developing and expanding aquaculture research facilities at Illinois State University in Normal, Illinois, and Virginia Polytechnic Institute and State University in Blacksburg, Virginia, and to conduct such programs as are necessary to do basic and applied research for intensive water recirculating aquaculture systems.

[(b) AUTHORIZATION OF APPROPRIATIONS.—There are authorized, in the event the Secretary decides to take action under subsection

(a), to be appropriated \$500,000 for each of the two facilities for fiscal years 1991 through 1997 to carry out this section.】

SEC. 1477. AUTHORIZATION FOR APPROPRIATIONS.

There is authorized to be appropriated \$7,500,000 for each of the fiscal years 1991 through 【1997】 “2002”. Funds appropriated under this section or section 1476 may not be used to acquire or construct a building. . . .

SEC. 1483. APPROPRIATIONS.

(a) There are authorized to be appropriated, to implement the provisions of this subtitle, such sums not to exceed \$10,000,000 for each of the fiscal years 1991 through 【1997】 “2002”. . . .

A P P E N D I X

AGRICULTURAL RESEARCH, EXTENSION AND EDUCATION QUESTIONS FOR CONSIDERATION FOR 1997 REAUTHORIZATION

RESEARCH SYSTEM STRUCTURE

If the U.S. agricultural research, education, and extension system was created today, how would it be structured to maximize the social rate of return on federal funds committed to the system? How would such a system compare to the current system, which traces its roots back to the Morrill Act of 1862?

USDA's research budget for in-house research is more than twice the average for all government agencies. What type of research should be conducted in-house by ARS and what research can be done as well and more cost effectively by nonfederal institutions?

Is there a need for a college of agriculture in every state or should there be a greater effort to regionalize agricultural research (such as develop regional centers of excellence that link researchers from various states to work on research of regional importance)? What would be the impact of such a change on states with smaller colleges of agriculture that may end up closing or losing resources?

How should the more than 100 ARS laboratories be consolidated to increase efficiencies, reduce duplication with land grant research, and maintain the "critical mass" of scientists and equipment needed to ensure quality science?

Should limited federal funds be spent to construct research facilities at and for land grant and other universities?

How should our research system structure and delivery be changed to be prepared to meet the challenges of the agriculture sector in the next century?

FUNDING MECHANISMS AND ISSUES

In federal funding of agricultural research, what would be the ideal allocation of funds for basic and applied research? What has historically been the allocation and what is it today?

Federally funded agricultural research is allocated among intramural funds, formula funds, competitive grants, and special grants. Are these the most effective methods of allocating funds? If not, what is a more effective method? If they are, what is the proper balance between intramural funds, formula funds, competitive grants, and special grants?

Should receipt by land grant universities of federally-funded agricultural research and extension funds be contingent on their ability to demonstrate that a wide variety of stakeholders have effec-

tive input into a systematic prioritization of research and extension issues?

Should federal programs and policies enhance the land grant system's efforts to realize organization efficiencies and synergies that broaden and expand access and relevancy? In particular, should federal agricultural research funds provide incentives for regional centers, consortia, programs and projects that integrate and mobilize multi-state and multi-institutional (including 1862, 1890 and 1994 colleges) resources?

It is well recognized that the linkages among teaching, research and extension need strengthening. Should federal formula funding for research and extension be combined into a single allocation to land grant universities requiring that the use of these combined funds reflect a coordinated effort to link university research and extension in the national interest? Should a portion (for example, up to one half) of the formula funds for research and extension at each institution be directed to fund programs, projects, and activities that integrate teaching, research and extension?

Should federal funds be expanded for competitive challenge grants to creative teachers and teaching teams to develop innovative multi-disciplinary and systems-based course materials and curricula?

Should the National Research Initiative competitive funding of food and agricultural research authorized at \$500 million by Congress be funded at that level? How can this be accomplished?

Are special grants or research earmarked by the appropriations committees worthy investments? Do they serve national interests? Would greater reliance on competitive funds rather than earmarks provide an increase in the social or public return from these research funds?

Should federal funding for research only be awarded for research of national priority? Should competitive grant funding only be awarded for research of national priority?

What is the current mix of applied versus basic research in ARS? What would be the impact of directing that ARS's research portfolio maintain a certain percentage of basic research on the theory that basic research holds less promise of immediate commercial application and the private sector can be relied upon to conduct much of the needed applied research?

To what degree is publicly funded research, particularly ARS research, focused on public goods, such as natural resources and the environment, food safety, nutrition, and rural economic development, and on other research subjects where the benefits accrue to more than one state? What would be the costs and benefits of directing that a majority of public research funds be dedicated to public goods in which the private sector is unlikely to invest?

What percentage of ag research funding is attributable to non-competitive funding sources, including special grants? What is the corresponding percentage for other major federal research entities including NIH, NSF, NASA, etc.? If there are significant differences, why do they exist?

The U.S. Department of Agriculture (USDA) differs from other federal agencies that support science in that the majority of agricultural research—more than 60%—is done in-house, by the Agri-

culture Research Service (ARS). (Other major federal research agencies, such as the National Institutes of Health and National Science Foundation, award more than 80% of their research funds competitively to scientists at a wide range of extramural laboratories.) What would be the costs and benefits of initiating a transition to a more NIH-like approach (with competitive grants as the main delivery system of federal funding) to federal agricultural research? Would this approach provide greater public return on the investment?

There is widespread support for increasing the percentage of federal agricultural research funding that is awarded competitively, as well as increasing the amount of dollars available for such grants. Assuming continued fiscal constraints, the options for meeting this demand are: (1) to use savings stemming from changes in mandatory spending programs; (2) to redirect a portion of formula funds and special research grants to the current competitive grants program; or (3) to redirect a portion of ARS funding to this purpose. What would be the costs and benefits of implementing any one or a combination of these approaches?

Should the formulas by which food and agricultural research and extension funds are allocated within the land grant system be revised to better reflect changing state demographics and the increasingly diverse food and agricultural research community? Are these formulas appropriate for the research and extension needs of the 1990's and beyond? Would a regionally based (rather than state) formula approach better serve or provide a greater return to agriculture? What impact would changes in these formulas have on land grant universities?

How do smaller universities fare in the competitive grant process? Is it appropriate for the federal government to "set aside" a portion of the grant for these smaller universities?

EXTENSION SERVICE ISSUES

In the absence of federal funds for the Extension Service, would states and localities continue to provide the service? Could the federal funding role be replaced with a memorandum of agreement to guarantee information sharing, i.e., a flow of knowledge from federal and other research agencies into the hands of the extension personnel?

Should the Extension Service's research base be broadened to include the entire university (not just the colleges of agriculture) as well as non-land-grant research sources and focus public extension on problems that lack the incentive for private investment and whose resolution produces public goods?

The National Research Council reports an imbalance between the amount of Extension programming on human, community and economic development needs, and the level of support for applied research capacity in economics, public health and related disciplines. Observers also express concern that Extension focuses too much on social needs issues, to the detriment of the more traditional agricultural areas. What would be the costs and benefits of integrating Extension's social needs program more closely with similar programs of the Departments of Health and Human Services, Commerce and others?

Who are the primary users and beneficiaries of the Extension Service? Should consideration be given for user fees to be charged for these services?

In view of a declining level of federal funding for Extension, how can federal funds be targeted to have a greater impact on the system such as funding innovative means of electronic information dissemination or funding to facilitate regional extension efforts?

PRIVATE SECTOR ISSUES

What is the extent of private sector funding of agricultural research at land grant universities and the nature of the relationship between the universities and the private sector? Has this relationship affected the types of research being conducted at these universities? How should federal funding for land grant university research be altered (types of research funded, purpose of funding) in view of increased private sector funding for this research?

What are the costs and benefits to the federal government of ARS Cooperative Research and Development Agreements (CRADAs) with the private sector? Does ARS manage CRADAs to ensure they are being implemented equitably, attracting high-quality private sector participation and producing results that benefit the U.S. public?

Should the federal delivery system for agricultural research be designed to place greater emphasis on matching federal funds with those provided by state, local or private sources?

What mechanisms, if any, should the Federal Government use to elicit increased state or private funding for agricultural research?

COORDINATION AND PRIORITY SETTING PROCESS

Are there overlapping missions and duplication of effort between federally conducted research and research conducted by universities and the private sector? Is there duplication with research funded through research and promotion programs (check-offs)? How can the mission and focus of USDA's and land grant universities' agricultural research program be more clearly defined to better complement one another and avoid unnecessary duplication?

Since the private sector accounts for the preponderance of total agricultural research spending, what processes exist to ensure that public research does not unnecessarily duplicate efforts already underway among private researchers? If no or few processes exist, is it desirable to develop them? If so, how could they be reconciled with the need to protect confidential business information?

What is the best process to use to set priorities for research, extension and education? Should additional guidance be given to the newly authorized National Agricultural Research, Extension, Education and Economics Board regarding how it is to function? What priority setting process should be used to ensure that recommendations reflect the needs of those who benefit from and utilize agricultural research conducted by or funded by the Federal Government? Is it important to evaluate whether priorities have been followed when research funds have been awarded?

ACCOUNTABILITY

What is the American public getting for its \$1.8 billion annual investment in agricultural research? (For example, how much funding goes to scientists versus administration and facilities, how many USDA and land grant universities are doing research in similar areas, and how many prestigious scientific awards for agricultural research go to USDA, university and private sector scientists respectively.) What is the best criteria to judge whether the Federal Government is getting the most for its agricultural research dollars?

With growing accountability in Government (for example, GPRA), how should federally-funded agricultural research results be measured and their impacts evaluated? Is there a body of science that can be used to measure research results and impacts? If so, is it currently being used?

Agricultural economists have generally estimated high rates of return for federal funding of agricultural research. However, the methodology employed in some of these studies has received substantial criticism. Is such criticism justified, and if so, what are the implications for federal funding of agricultural research?

OTHER ISSUES

Does the President's new line item veto authority enable him to veto special research grants? What about those that are listed in legislative history but not in statutory language? What implications might the line item veto have for the promotion of competitive grants rather than earmarked funds?

Offering federal matching funds for commodity check-off funds allocated to regional or commodity research is one option for increasing private industry support for public agricultural research and increasing the total funding for such research in real terms. Other options exist in the areas of tax incentives and intellectual property right benefits. How are public-private research collaborations progressing under current policies? What changes could be made to increase the efficiencies and benefits of these collaborations while protecting the public interest?

How does America stack up against the world in agricultural research investments?

Where scientific research allows a consensus statement to be made (for example, on the benefits of biodiversity) what mechanisms exist or should exist to translate this consensus into information that can be considered and used by policy makers in both Congress and the Executive branch?

How does the U.S. connect with the international agriculture research network? Are changes needed to strengthen or improve this linkage?